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THE ORIGIN AND MIGRATION OF THE NEGRITOS IN THE ANDAMAN ISLANDS

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Introduction

IN an earlier publication (Sarkar 1953) attention was briefly drawn to Eugen Fischer's (1931) hypothesis regarding the origin of the Negrito woolly hair by mutation from the Australoids. The phenomenon of pygmy or dwarf formation has in recent years been investigated from various points of view and it is proposed to discuss them in greater detail in the present paper.

Along with this, the presence of the Andamanese pygmoids in their present habitat has not yet been satisfactorily explained. Radcliffe-Brown (1922) held that the Andamans 'were peopled, either by sea or by land, from the region of Lower Burma." Recent oceanographic researches can satisfactorily explain the presence of the Andamanese in their present habitat. In discussing the question of migration in an insular area the sea-faring tendencies of the people concerned are probably the primary criterion. An example of it can be afforded from the Mergui Archipelago[1], the population of which is comprised of such sea-faring peoples, popularly known as 'Sea-gypsies'.

[1] Haetinger (1942) has found a strong Veddid and Malayan element among the Mawken of the Mergui Archipelago.

All these will be examined in larger detail in the present paper.

Origin of Pygmy Forms or Dwarfism

The Negrito problem has in recent years been the subject of intensive studies by Gates (1948), Gusinde (1948) and Schebesta (Fischer, 1953). The two last-named authors have spent a large part of their lifetime among the pygmies of Belgian Congo and as such, much is now known of the pygmies.

Speiser (Fischer, 1953) from his studies among the pygmies of New Hebrides came to a decisive conclusion that there is nothing like a pygmy race. He showed that the tall coastal peoples and the pygmy mountainous inland peoples are varieties of the same race. He ascribed the pygmy formation to environmental factors. He also pointed out that pygmies in other parts of the world do not either belong to the same race or to the branches of an older racial stock. Fischer (1950) also supported the above views of Speiser in the following terms : 'Niemals bilden also etwa die Pygmaen zusammen eine Rasse, nor war das in der Vergangenheit der Fall'. In his recent review of Schebesta's work Fischer has emphasized : 'Ich glaube als Genetiker, dass in jeder Rasse durch Mutation Kleinwuchs, Pygmaenwuchs oder Grosswuchs entstehen konnen'. Gates (1948) also contends that 'dwarfism in mankind, like gigantism in birds, thus appears to have arisen many times independently'.

This view stands in sharp contrast with the current anthropological idea of a common inter-relationship of the pygmies in different parts of the globe. Fischer (1950) has shown three ways of pygmy formation :

(a) Due to the direct influence of environment (nutrition and other factors), retardation in growth may take place. Such influences are neither racial nor hereditary but are only local modifications, as in the case of Speiser's New Hebrides pygmies.

(b) Through the long-standing process of selection, due to malnutrition, climatic and other influences, the taller hereditary lines out of a medium or tall population can be more and more reduced and lastly eliminated. At the same time other individualities may also develop. Fischer is of opinion that this process is

involved in many of the pygmoids, e.g., the Veddas, and probably the Laplanders. Such individuals constitute a race.

(c) Through mutation in normal populations, which concern genes other than those related to the process of selection, as in (b) above, namely, the basic gene for growth. These mutations are eventually selected and the non-mutated statures are eliminated. The origin of these mutations is proved subsequently through crosses and also from the parallel pygmy mutations in European populations.

In arriving at the above conclusions Fischer greatly depended on the various earlier authors, specially Hanhart (1925) who found in certain inbred districts of Switzerland and in the island of Veglia in the Adriatic Sea, a number of pygmy forms (midgets). Hanhart's dwarf cases were mostly adiposo-genital dystrophics ; they were born normal but growth disturbances set in between the second and third year of life. Gusinde, at the request of Fischer, observed among the Bambuti pygmies of Belgian Congo that the new-born pygmy babies are not born with a pygmy appearance ; they are hardly 3 cm. shorter than the European new born babies. It thus appears that disturbances in growth in early life are one of the chief causes of dwarfing.

Associated with the above growth disturbances, Fischer has also drawn attention to Staffe's researches on acclimatization and its relation to the formation of the pygmies. Staffe after his long stay in the Kameruns has shown that tropical Africa not only shows pygmy man but also many types of pygmy animals—pygmy elephant, pygmy antelope, pygmy hippopotamus, pigmy pigeon, pigmy grebe ; so to say, a pigmy fauna. To this may be added the pygmy chimpanzee (*Pan paniscus*) from the south of the Congo River (Coolidge, 1933). Staffe has combined the whole phenomenon under one common cause. The animal diseases in South Africa have their origin in photosynthesis due to the main role of haematoporphyrin in the highly ferruginous soil of Africa. The iron content of food and drink causes the increase of porphyrin and haematoporphyrin in the body which undergoes photosynthesis due to the strong sun-light and lets loose the process of mutation. Fischer fully supports Staffe's hypothesis and has adduced further proof of pygmy fauna in the ferruginous

soil of southern New Caledonia after the findings of Fritz Sarasin.* Gates (1948) in his *Human Ancestry* has discussed at length the problem of dwarf races and is of opinion : 'it seems probable that they represent mutational dwarf derivatives of different races and not (except perhaps the Bushmen) survivors from an early ancestral stage of man'.

The Negritos of the Andaman Islands

With the above process of pygmy formation before us, let us see how for the above conditions apply in the case of the Andaman Islands. Nothing is known of the growth phenomenon of the Andamanese. An attempt, however, has been made to find out disturbances in growth, if any, from a comparative study of the height and weight measurements of the Andamanese and a few other aboriginal tribes of India. Man (1883) published the original data of 40 male Andamanese and 37 female Andamanese which have been compared with similar data from Santal Parganas (Mitra, 1940).

TABLE I

Andamanese Height and Weight Compared.

		Height (in.)			Weight (lbs.)		
		Max.	Min.	Av.	Max.	Min.	Av.
Andamanese	Male (40)	64·25	53·75	58·91	119·5	77·5	97·50
	Female (37)	59·50	52·00	55·17	127·0	67·0	98·20
Santal	Male (118)	—	—	62·71	—	—	99·08
	Female (178)	—	—	58·39	—	—	87·02
Male	Male (69)	—	—	61·51	—	—	90·98
	Female (85)	—	—	57·07	—	—	77·07

*Only two mammals are found wild in the Andaman jungles of which *Sus andamanensis*, at least in size, appears to be a pygmy variety of *Sus crofa.* Of the animals imported in recent times the dog only has been domesticated by all the aborigines, excepting the Jarawas. Whether the imported animals have undergone any change is not known.

TABLE II

Analysis of Andamanese Stature.

	Male (40)		Female (37)	
	No.	%	No.	%
V. Short (52″ – 59·96″)	26	65·0	23	62·16
Short (60″ – 63·56″)	13	32·5	14	37·84
Medium (64″ – 67·96″)	1	2·5	—	—

It will be seen from Table I that while the male Andamanese are shorter and lighter than the male Santals, the female Andamanese are much heavier than the female Santals inspite of the shorter stature of the former. Compared with the Mālè both the Andamanese sexes are much heavier than the former inspite of their higher statures ; the difference of 16·13 lbs. in the weight of the females particularly being more marked than that in the case of the Santals and the Andamanese. If the difference of 1·53 lbs between the weights of the male Santal and Andamanese is ignored it can be said that the Andamanese standards of height and weight are superior to those of both the Santal and the Māle′, and the Andamanese females excel in this category. The Andamanese heights have remained highly constant, as will be evident from Eickstedt's (1931) figures. He found the mean heights of 10 male and 22 female Andamanese to be 58·72 inches and 55·40 inches respectively as compared with 59·24 inches and 55·36 inches respectively for 42 male and 38 female Onges of Little Andaman.

In whatsoever manner the differences in the weights of the above three peoples are interpreted, as being due to nutritional differences or other factors, the highest weight of the Andamanese females may, to a certain extent, be due to the excessive accumulation of fat on the gluteal region, known as steatopygia. The steatopygia of the Andaman Negritos has not been so commonly described as those of the Bushmen, Hottentot and other

African peoples. Gates (1946, 1948) has also discussed at length the question of steatopygia. He has shown evidences of steatopygia during the palaeolithic times as evidenced in drawings and cultural relics and also among the Caucasians. According to him, it arises among the latter 'as a pathological condition arising from endocrine derangement'. He also regards it 'as an expression of constitutional infantilism in posture and in fat distribution. The pelvis is also more anthropoid than in any other living race and the sacrum is sometimes very simian'. In arriving at this opinion, Gates has utilized Drury and Drennan's studies on the pudendal parts of the Bushmen. Drennan has also suggested that the pygmy form and the steatopygia are due to glandular adjustment to the desert environment and the latter is a 'method of storing fat for the emergency of rearing children through drought' ; but Gates has rightly pointed out that the higher aridity of Central Australia has not produced the same character in the Australian aboriginal women. It appears however, from Gates' survey that infiantilism, steatopygia and the pygmy stature are somewhat closely associated. Even the dwarfs of Okinawa show a tendency to steatopygia. Endocrines have been found to be responsible for the various kinds of dwarfism and they have played their role not only in the deserts and jungles of Africa but also in the modern cities and in the insular regions of Veglia, Okinawa and the Andamans. The genetic behaviour of steatopygia is not fully known, but because of its association with the endocrines it is not unlikely to presume that it has no influence on the reproductive physiology. Hanhart's dwarfs were sterile and so also is the case with the majority of the infantile ones. The Andamanese of the Great Andaman are nearly extinct and Man (1882) commented on the 'limited fecundity of the women' to be one of the factors of the decaying population before any significant contact with civilization. This will be also apparent from Table III where the reproductive lives of 100 Andamanese women have been analysed from the original data of Portman. The North Andaman data were collected in June 1893 and the South Andaman data in June 1894. The number of unproductive marriages is high in both the regions, and the ages of the above groups are given below :

TABLE III

Reproductive Lives of Andamanese Women

	North Andamanese				South Andamanese			
No. of Women	50				50			
Less Unmarried	4				1			
	46				49			
Unproductive Marriages	21				17			
	25				32			
	L		D		L		D	
	m	f	m	f	m	f	m	f
Children	14	9	25	11	7	5	45	33
Av. Children per mother	2·36				2·81			
Av. Living ,, ,, ,,	0·92				0·38			
Sex Ratio	39 m : 20 f				52 m : 38 f			
Net Reproductive Index	0·36				0·16			

TABLE IV

Number and Ages of Unreproductive Mothers

N. Andaman.		S. Andaman.	
25 yrs.	3	23 yrs.	1
26 ,,	3	26 ,,	2
27 ,,	2	27 ,,	2
28 ,,	5	28 ,,	2
29 ,,	1	29 ,,	1
33 ,,	1	30 ,,	1
35 ,,	2	32 ,,	2
36 ,,	2	37 ,,	1
37 ,,	1	38 ,,	1
45 ,,	1	40 ,,	3
	21	42 ,,	1
			17

Whether the Andamanese migrated into the Islands as a perfected type or the mutation and the selective process occurred in the local soil must remain an open question till a thorough genetic survey of the Andaman Negritos is carried out. A few points are worthwhile mentioning at this place. It will be seen from Table II that among both the sexes the frequency of short stature cannot be altogether ignored. Among the males a small percentage of medium statured population is present as well. Eugen Fischer is right in designating the Andaman Negritos as pygmoids rather than pygmies. This may probably be explained by the fact that, by the year 1882, the selective elimination of the other types of stature was not complete. Portman (1899) pointed out that during the measles epidemic of March, 1877 the majority of deaths were from among the robust adult males. It would thus not be unfair to assume that there were, at certain times, more medium or short statured peoples than what was found in 1882 by Man, and that they have undergone some amount of selective elimination on the Andaman soil. It is also possible that the Andamanese underwent some form of endocrine imbalance due to their migration in an insular area, which was originally foreign to them. The endocrines not only retarded their stature but probably reacted upon their reproductive physiology also.

Migratory Route of the Andamanese

The recent deep sea researches of Molengraaf (1921) have been utilized by Kaudern (1939) to interpret the probable routes of migration of the Negritos into the Andaman Islands. Kaudern has shown that during the quaternary times the alternating glacial and interglacial periods due to the severe climatic changes, brought in a rise and fall in the sea level. The great submarine ridge stretching from southern Burma to near about the northern point of Sumatra, whose highest points represent the present day Andaman and Nicobar Islands, is already well known. A fall of 300 metres in sea level would establish a direct contact with Burma and make the migration of man and animals possible. And this could be possible during a glacial epoch alone.

The Andaman and the Nicobar Islands are separated by a wide strait and the absence of Negritos in the Nicobars is explained by Kaudern as follows : 'If the pygmies, when they migrated from the continent towards the south, were able to reach the former (*Andamans*)* but not the latter islands (*Nicobar*)* it means that there has at some time been a fall of sea-level of nearly 300 metres, but not so much as 600 metres in these tracts'.

That the Andaman aborigines take advantage of the tides and the intervening small islands or large rocks will be apparent from the behaviour of the Jarawas in course of their regular migrations from the South Andaman to the Middle Andaman along the west coast of the Andaman Islands. The Islands have a general slope towards the east which causes the western coast to rise more above water during the low tide. On the west coast between the South Andaman and Middle Andaman there are two islands—the Bluff Island and to the north of it the Spike Island. The Jarawas come from the South Andaman to the Bluff Island and then to the Spike Island and then to the Middle Andaman. The sea is crossed by rafts, which are made of a large number of light hollow bamboos tied with one another in the shape of a large rectangle, and the paddles are made by splitting half the large spade of *dani* cocoanut (*Nipa fruticans*). After the sea is crossed the raft is rolled into a large bundle and left in a safe place. This is the only route of migration of the Jarawas from the north to the south and their haunts of temporary abode in the intermediate islands are quite well known.

Such sea-faring men were responsible for the peopling of the Andaman Islands in the hoary past. The out-rigger canoe of the Onges of Little Andaman appears to be a later intrusion and the primitive Jarawa raft was probably the one used for transport.

Summary

1. The different ways of pygmy formation or dwarfism have been discussed. A retardation in growth in early life appears to be associated with dwarfism.

* Italics mine.

2. The Negritos of the Andaman Islands have been discussed in the light of the process of pygmy formation. Steatopygia, infantilism and dwarfism are probably the effect of endocrine derangements and the reproductive physiology of the Andamanese appears to have been affected as well. The Andamanese appear to have been facing extinction long before they came in contact with civilization, as is seen in their very low net reproductive index in 1893-94.

3. The Andamans were probably peopled in the quaternary times during a glacial period when the fall of sea-level brought lower Burma in direct contact with the islands. The migration possibly took place in the primitive Jarawa rafts by hops through intervening islands during low tides.

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WEAVERS OF BARPALI

A Study of their Socio-Economic Condition

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Introduction

OF all the weavers, the Bhulias are the best. They are especially renowned for their picturesque designs. They weave cotton yarn as Kuli and Ganda weavers do, but there is no taboo against weaving silk and *tasar* yarn. Some of the Bhulia weavers make shirting, coating and other piece-goods in *tasar* yarn in Barpali. The Bhulias do not kill the silkworms inside the cocoons by steaming them as the Kusta weavers do. The Bhulias believe that the silkworms possess the signs of *sankha, chakra, gada* and *padma* in their body, such as the Lord Krishna used to possess. The killing of the worms is therefore a great sin. To confirm this religious taboo against carrying on the occupation of Kusta weavers, some of the Bhulias told me that once upon a time two Bhulias practised killing the silkworms by steaming them. They then wove cloths as Kustas did. But they did not live long, as they had done something contrary to the rules of nature. God does not harm the Kusta weavers who steam the worms to death, as He Himself has given that job to them to do. Killing the worms, spinning the silk yarn and weaving cloths of it are the given hereditary occupation of the Kusta weavers. The Bhulia or any other weaver who knows how to weave silk yarn can do so by purchasing either yarns or steamed cocoons from the Kusta weavers.

There are two divisions in the Kusta caste. One is known as Laria Kusta and the other as Oriya Kusta. The former are comparatively rich and more prosperous than the latter. They buy yarn from Chaibasa and Chakradharpur and various other places. As soon as they buy the yarn, they carry it to their homes. On the way some of the

worms cut through the wall of the cocoons and come out. These destroyed cocoons are not used by the Laria Kusta weavers. They pick the bored cocoons out of the good ones and sell them to the Oriya Kusta weavers. The Oriya Kusta weavers do not kill the worms of the cocoons like the Bhulias. So they have no direct business in cocoons with the wholesale dealers. They always depend upon the Laria Kustas for supplying them with cut cocoons, which they do not know how to use. Spinning destroyed cocoons is a very laborious process as the threads come out in small lengths and, as a result, they need constant tying up to get a continuous thread. The Oriya Kustas do not weave themselves. They sell the *tasar* yarn to the Laria Kustas who weave piece-goods and sell them in the market. It is said that the goods woven out of these threads are very strong and fetch a greater price than those woven from the *tasar* yarns spun from undestroyed cocoons.

The weaving of the Kuli Meher may be compared with that of the Gandas, so far as the texture and techniques of weaving are concerned. The latter caste is a scheduled one and the people belonging to this caste are Gandhi's Harijan, whereas the former caste is not. The Gandas eat cooked food from the house of the Kusta and Bhulia Mehers, but never from Kuli Mehers. The Kuli Mehers are untouchable by the Kusta and Bhulia weavers as the Gandas are. The Kuli Mehers are looked upon as inferior to even the Gandas, but the Gandas do not agree to this. It is observed that Gandas do not live in the main village near the houses of people belonging to high castes. But it is not so in the case of the Kulis. They live in the village with the other people. The Kusta and the Bhulia weavers say that this strictness of caste character regarding touchability is not now-a-days so rigidly followed. The once-untouchable Kuli Mehers are gradually becoming touchable in society. This process is under way and will take some time to be fully crystallized.

In summary, the above social position of the four different weavers can be described as follows :

1. The strong taboo against killing the silkworms from the

cocoons observed by the Bhulia and Oriya Kusta weavers is perhaps a way ingeniously created by the castes concerned for maintaining their caste structure and not to allow encroachment upon one another's hereditary occupation.

2. To prevent also the same encroachment on the occupation of the Oriya Kustas, the Laria Kustas do not use the damaged cocoons, which they sell to the former weavers. The Laria Kustas are good *tasar* weavers. They have a very genuine ability of spinning destroyed cocoons. But they do not weave, as it will encroach upon the occupation of Oriya Kustas.

3. Considering the Kuli Mehers as inferior to the Gandas, who on the other hand are treated as the lowest in the ladder of caste organization, is a strange phenomenon. The basis of this concept is still unknown to me.

Economics of the Weaving Handicraft

It would be clearer to give the economic aspect of weaving of the four classes of Mehers (weavers) separately, as each class has a story about its source of livelihood quite dissimilar to that of the other classes.

Kusta Mehers (Laria Kusta) : This class of weavers, as said above, is considered superior in caste to all other weaver castes. They always weave silk and *tasar* yarns.

The silk cocoons are available for buying in Chaibasa and Chakradharpur in large quantities. Nevertheless, they are available in Khariar, Padampur, Baropahar, Rairakhol, Bamra, Phuljhar, Budasambar, Bolangir-Patna, Baud and Athmallik. The Kusta Mehers use cocoons of the above places, but they get the cocoons of Chaibasa and Chakradharpur in larger quantities. The cocoons in the rest of the places given above are not available in such an abundance. The cocoons of Chaibasa and Chakradharpur are bigger in size and are raised by the Hos and the Mundas, whereas those of the rest of the places are smaller ones and are generally known as *san kosa* (small cocoon). The *san kosa* is said to be and really is superior in quality to the big cocoons of Chaibasa and Chakradharpur. But the weavers do not depend upon good quality cocoons as they do not give much thread and are much more laborious

to transport. There are various kinds of cocoons which are different from each other according to their size and colour and time of availability. The chart given below shows the names of different kinds of cocoons and distinguishing characters of each of these varieties.

Name of Cocoon	*Time of Availability*	*Characteristics*
Daba	Dasara-Kartik	Bigger cocoons
Mudia	,,	Smaller than Daba, tough and contains threads in largest quantity. Looks blackish.
Laria	,,	Has tougher thread than Mudia. Looks blackish.
Bagei	Pus	Grows from the seedling of the Daba. Whitish in colour with a little tinge of red.
Raili	Dasara	This variety is available in Raigarh (Champa).
Munga	Last fortnight of Kartik.	

The best of all cocoons used by these weavers are the local cocoons raised from the jungles of Khariar, Padampur, Baropahar, etc., as said before. They are available in the month of Magusir-Pus. The cocoons which come from Khariar are known as *sitha* and *makhan guda*.

The wholesale dealers who reside in Chaibasa and Chakradharpur collect cocoons from the aboriginal inhabitants of these areas. As soon as they stock the stuff and fix a price, they write letters to some of the weavers of this village, who go to them every year. All weavers cannot afford to go to such a great distance. Those who are rich and can afford to buy thousands of cocoons usually make a trip to Chaibasa and Chakradharpur. They bring wagons of cocoons and supply the weavers. They buy from the wholesale dealers on the basis of what is known as ***pakikahan***, i.e., per 1300 cocoons, and sell them to the poor weavers on the basis of ***kachikahan***, i.e., per 1000, at the same price they paid for 1300. Generally, out of the total Kusta population living in Barpali, there are only ten to twelve men who regularly go to Chaibasa and Chakradharpur to buy.

For example, this year a man has brought 60 gunny bags of cocoon, each bag containing 2 ***kahans*** of cocoons, i.e., 2600

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cocoons, costing Rs. 70. Ordinarily others bring cocoons not less than four to five thousand. These people who carry on business in cocoons without weaving themselves are known as *bepari* (merchants). They generally go to Chaibasa and Chakradharpur in the months of Kartik, Magusir and Pous every year. They bring cocoons at the rate of Rs. 33 per 1300. Last year the price was high, Rs. 40 to Rs. 45 per 1300. The relationship between the merchants and the purchasers is this. The merchants supply cocoons to the weavers at the Chaibasa rate per thousand. The weavers (purchasers) weave cloths and give the goods to the merchants. The merchants price the piece-goods. They then pay the weavers something towards their daily expenses. The amount given to them towards living is deducted from the price of the piece-goods and the rest is accounted for as clearing off the price of the cocoons which the weavers received on credit. The merchants supply cocoons to the weavers and the latter supply the former with piece-goods. This process continues till the period of contract comes to an end, when the merchants read to the weavers aloud their business account and calculate before them how much they owe to them or *vice versa*. The period of contract is generally one year. In some cases, it is half-yearly or nine months. Generally the contract is not dodged, but the weavers are not ordinarily able to clear their debts ; so the chain of business continues uninterrupted with a new contract in the new year. One or two examples will make the above description clear.

During last Dasara, a weaver received 10,000 cocoons at the rate of Rs. 38 per thousand from a merchant. The contract was to give him 12 pairs of *chadar*. The price of each pair of *chadar* was fixed at Rs. 45. Weaving the *chadars*, one pair in eight days, the weaver supplied them to the merchant. Each time, when the weaver came with a pair, the merchant gave him an amount of Rs. 13-5-0 for his food expenses. As soon as he supplied all the twelve pairs, the merchant explained to him the account as follows. The price of 10,000 cocoons is Rs. 380. The price of twelve pairs of *chadar* is Rs. 540. The weaver received an amount of nearly Rs. 160 for his establishment expenses.

Another example is as follows : A weaver received 7500

cocoons at the rate of Rs. 35 per thousand, from a merchant. The contract was to give him *saris* (women's cloths). The weaver supplied him with eight pieces of *saris* at the rate of Rs. 40 per piece. Each time the weaver came with a piece, the merchant paid him Rs. 10 for food expenses. After the period of contract was over, the merchant gave the following account to the weaver. The cost of 7500 cocoons was Rs. 262-8-0. The price of 8 pieces of *saris* was Rs. 320. The weaver received Rs. 80 towards his food expenses, so the weaver still owed Rs. 22-8 0 to the merchant. As he could not pay, he made a contract to continue his business with the same merchant next year.

The Laria Kustas are the only people who carry on this business. There are Marwaris and other businessmen in this village, but they do not carry on business in cocoons, because they do not kill silkworms. Also, the weavers will not, as a rule of their caste, receive cocoons from them. The cocoons, as soon as they reach the destination, if they are not steamed, will all be destroyed by the worms. They cannot be preserved unsteamed and be disposed of according to convenience and demand in the market. So the non-Laria Kustas do not carry on this business. Moreover, this cocoon business is a standing business of the rich Kustas. The poor Laria Kusta weavers have their roots in their business. They always look forward to getting cocoons from them.

For the local small cocoons they do not necessarily depend upon the merchants. They themselves go to those places where the small cocoons are available and purchase whatever amount they can afford. The small cocoons are available in the month Kartik. These local cocoons are not as plentiful as those from Chaibasa, so as soon as the harvest-time for local cocoons approaches, each man makes a trip to secure them without letting anyone know. As a weaver approaches the man who has some amount of local cocoons, he first fixes the price and then begins counting whatever amount is available from him. In the mean-time, while the counting is going on, if another weaver arrives at the spot, it is a standing custom among the Kusta weavers that the weaver who has first approached will give those who arrive later an equal share of the cocoons ; that is, the available amount

of cocoons is distributed equally among the weaver who first fixes the price and those who arrive later. If the first man does not give them any share, other weavers who had been there will come back and report this to other members of the caste. The result is that the first weaver is outcasted. No further relationship whatever is maintained with him until he gives them a share of his cocoons and admits his fault to the group.

Not all the Kustas depend upon the merchants for cocoon and disposal of their piece-goods. Many also buy cocoons from the merchants and also get them directly from Chaibasa and other places. They weave their *tasar* cloths and sell wherever they like. Some also get money in place of cocoon in advance and buy cocoons from wherever they like and give the woven goods to the money-lenders at a reasonable price.

A few concrete instances will make the whole situation clear.

First weaver. This man was weaving shirting when he was interviewed. He purchased the small cocoons, from which he produced yarns for weaving the shirting, from a market at Sohela at the rate of Rs. 30 per thousand.

Description of Goods	*Days to finish*	*Persons engaged*	*Descriptions of warp and weft*	*No. of teeth in comb used*	*Market price*
Shirting 6 yds. by 36 in.	5	2 women 1 man	warp-14 threads weft - 16 threads 500 cocoons	25 punja	Rs. 24

This chart shows that for a shirting piece of 6 yards long and 36 inches wide two women and one man were engaged for five days to finish it, and they sold it at Rs. 24 in the market. The persons who were engaged are all members of one family. They spent Rs. 15 for 500 cocoons. Thus they earned Rs. 9 in five days, or Re. 1-8-0 per day.

Second weaver. He himself purchased seven bags (14 *kahan*) or 18,200 cocoons at the rate of Rs. 26-8-0 per kahan. If the transport charges are included in the initial price of cocoons, it cost Rs. 30 per 1300. The following chart gives an idea of his income from a *kapata* which he was weaving at the time of observation.

Description of goods	*Days to finish*	*Persons engaged*	*Description of warp and weft*	*Teeth in comb*	*Market price*
Kapata 4½ yd × 45″	7 days	2 men 2 women	warp-10 threads weft-14 threads 550 cocoons	29 punja	Rs. 40

The above chart shows that for a female cloth of 4½ yards long and 45 inches wide, two men and two women were engaged for seven days, and they sold it at Rs. 40 in the market. The cost of 550 cocoons at the rate of Rs. 30 per 1300 comes to about Rs. 12-12-0. The workers get Rs. 27-4-0 for seven days. Here, all the persons engaged in weaving did not belong to one family. One woman was from outside the family. She was paid eight annas for spinning 100 cocoons. She spun all the cocoons used in this cloth. So she was paid Rs. 2-12-0 for her labour. Thus the family gets an income of Rs. 3-8-0 daily.

Third weaver. This weaver got a loan of Rs. 1200 from Kutartha Acharya on condition that he would buy cocoons personally from wherever he liked and would supply whatever piece-goods he wove. Kutartha Acharya is a businessman doing business in weaving by the putting-out system. Also, he has engaged in his factory large numbers of weavers by paying them a monthly salary. The weaver bought cocoons directly from Chaibasa at the rate of Rs. 30 per 1300. This amount of money includes the fare for transporting the goods from Chaibasa to Barpali.

Description of cloth	*Days to finish*	*Persons engaged*	*Description of warp and weft*	*No. teeth in comb*	*Priced by money-lender*
Jatha and Jod 7½ yds. by 45 in.	12	2 women 2 men	warp-12 threads weft-14 threads 850 cocoons	29 punjas	Rs. 45

This chart shows that for a cloth and a *chadar* attached to it in one, 7½ yards long and 45 inches wide, two men and two women were needed to finish it in 12 days. As this family is restricted from selling it in the market, the piece was given to Kutartha who was the money-lender for the family. All the persons engaged in making this cloth did not belong to a simple family. One man from outside was engaged. This man happened to be the brother of the head of the family. If he had not been

a relative, he would have been paid Rs. 25 monthly. Nevertheless, as this brother helps him, he gets also mutual help from him when in need. Regarding the labour income of 4 persons for weaving such a cloth and *chadar*, it can be calculated as follows : The price of cloth and *chadar*, Rs. 45. The value of 850 cocoons used is Rs. 19-11-0 and the cost of colour and of silk threads used in borders is Rs. 2-5 0. The net income is Rs. 23, so the daily labour income of 4 persons is Rs. 1-14-8.

Fourth weaver. This weaver bought cocoons worth Rs. 200 at the rate of Rs. 33 per thousand. He gave an account of a *chadar* which is stated below :

Description of cloth	*Days to finish*	*Persons engaged*	*Description of warp and weft*	*Market price*
Chadar (2 pieces)	7	2 women	warp-12 threads	Rs. 60
6 yds. by 54 ins.		1 man	weft-18 threads	

This family consists of only husband and wife. The wife could not spin all the cocoons necessary for the *chadar*. Therefore they engaged a widow who spun all the amount of weft threads required for it. The weaver sold to her a certain amount of cocoons at the market rate and received prepared weft strands at the rate of Rs. 2-8 per *pal*. In this *chadar*, 6 *pals* of warp threads worth Rs. 18 at the rate of Rs. 3 per *pal* and 14 *pals* of weft threads worth Rs. 35 at the rate of Rs. 2-8 per *pal*, were used for warp and weft respectively. So the man spent Rs. 53 in raw material for a *chadar* and three men were engaged for 8 days to finish the chadar worth Rs. 60. So they earned Re. 1 each daily.

Fifth weaver. The weaver had cocoons from last year. He bought them at the rate of Rs. 48 for 1300. The following chart is a financial statement of three pieces of *chadar*. These *chadars* are not equal in use to those of the fourth weaver. These *chadars* are used only as a form and not for warmth. They do not protect the body so much.

Description of cloth	*Days to finish*	*Persons eugaged*	*Description of warp and weft*	*No. Teeth in comb*	*Market price*
Chadar (3 pieces)	7	2 women	warp-9 threads	27½ punjas	Rs. 30
6 yards by		2 men	weft 14 threads		
45 inches			600 cocoons		

The following chart gives in summary a picture of the whole economic situation of weaving different kinds of cloths and the day and the number of persons required for weaving them :—

Description of cloths	*Length width*	*Days taken*	*Persons engaged*	*Cocoons*		*Punja*	*Price*		*Labour income per day*			
									Group		*Per person*	
				number	*Price*		*Bepari*	*Market*	*Bepari*	*Market*	*Bepari*	*Market*
					Rs. as.		Rs.	Rs.	Rs. as. p.	Rs. as. p.	Rs. as. p	Rs. as. p.
1. Chadar (2 pieces)	4 yds. ×45″	8	1 woman 2 men	700	21	28	45	48	3	3-6	1	1-2
2. Than Kamij (Shirting)	7 yds. ×1 yd.	4	2 women 1 man	550	16-8	21	28	30	2-14	3-6	0-15-4	1-2
Kot (Coating)	7 yds. ×1 yd.	6	3 women 1 man	1200	36	20	49	56	2-2-8	3-5-4	0-8-8	0-13-4
3. Bengali sari	5½ yds. ×48″	5	2 women 1 man	650	19-8 2 —— 21·8	29—30 for silk	38 threads and	42 colour	3-5	4-1-7	1-1-8	1-5-10
4. Jatha and Jod male cloth with cover (chadar)	4½ yds. ×45″ 3 yds. ×45″	8	1 woman 2 men	850	27-8 (including	28 silk and	54 colour)	50	2-3	2-13	0-11-8	0-15
5. Kapata female cloth	5 yds. ×41″	5	1 woman 2 men	600	20 (including	26—27 silk and	42 colour)	45	4-6-5	5	1-7-6	1-10-8

This price of cocoons was calculated at the standard rate of Rs. 30 per 1000 fixed for this year.

The weaver could not finish the cocoons which he purchased last year. If he could have utilized them last year for this kind of *chadar*, he could have sold them at Rs. 36 for the 3 pieces. This year the price of cocoons has come down, so *chadars* of this variety are available at a cheaper rate, The raw material for these 3 pieces of *chadar* cost Rs. 22-2. Thus the 4 men received the sum of Rs. 7-14 for their labour in 7 days ; that is, the team of 4 men and women got Rs. 1-2 in a day.

The Bhulia Weavers : The Bhulias are well known for their beautiful colour designs and fine female cloths. They weave more female than male cloths. They get yarn from local controlled shops at a fixed price. Some years ago they say that they met with great scarcity of yarn. They had to go to distant places and get yarn at black market prices. The yarn at present is satisfactorily available because the Government has instituted rationing and every weaver has a ration card to buy yarn. Eighty percent of the Bhulia population is landless. Each has one or more looms and weaves throughout the year to earn his living. There are a few men who carry on business in cloths by opening shops and employing a number of weavers on the putting-out system.

But such cases are very rare.

A bundle of yarn weighs 10 pounds. There are various kinds of yarn which depend upon the counts of yarn. The cloths generally used by the people of this locality are woven with yarn of counts varying from 16 to 40. Cloths woven in yarn of counts above 60 are rarely used as they are expensive. As the number of counts of yarn goes up, the threads get thinner and thinner. So those who are expert weavers use yarns of counts above 60. A bundle of yarn consists of hanks (*munda*), the number of which depends upon the count of yarn of which the bundle is composed. If you get a bundle of yarn of count 20, you will get 20 hanks in that bundle, if you get a bundle of count 40, then you get 40 hanks in that bundle, but all weighing 10 pounds. In all the counts of yarn, each hank consists of 10 sub-hanks called *fanda.*

The Bhulias weave Kapata (female cloths) of varying sizes as follows :—

1.	A Kapata	of	2½	yards	long	and	¾ yards	wide
2.	,,	,,	3	,,	,,	,,	,, ,,	,,
3.	,,	,,	3½	,,	,,	,,	32 inches	,,
4.	,,	,,	4½	,,	,,	,,	39 ,,	,,
5.	,,	,,	5	,,	,,	,,	42 or 43 inches	wide

The women of this area do not generally use cloth of 5 yard length. But those of Brahmin, Sunari, Kusta and Berai castes use cloths of 5 yard length as they need it for veiling the head, which is not a custom among the women of other castes.

The cloths are woven with yarn of varying counts. As the count varies so also the thickness of each strand or pick of warp and weft respectively varies.

The following is a list of combinations of warp and weft according to their match for weaving good *kapatas* which the local women like :—

	Warp		*Weft*
1.	Yarn of 40 count, double strand	with	yarn of 20 count, single strand
2.	,, ,, 30 ,, ,,	,,	,, ,, ,, ,, ,, ,,
3.	,, ,, 34 ,, ,,	,,	,, ,, ,, ,, ,, ,,
4.	,, ,, 26 ,, ,,	,,	,, ,, ,, ,, ,, ,,
5.	,, ,, 20 ,, ,,	,,	,, ,, ,, ,, ,, ,,

The following chart is a calculation of how much yarn is necessary for a cloth 4½ yards long and 41 or 42 inches wide woven with varying counts of yarn given just above :—

1. Yarn of 40 count with double warp strands, weft of 20 count single weft pick :—

14 punja	*15 punja*	*16 punja*	*17 punja*
2 munda and 3 fanda for warp	2½ munda for warp	3 munda for warp	3 munda and 5 fanda for warp
3 munda for weft	2½ munda for weft	2½ munda for weft	2½ munda for weft

2. Yarn of 30 count with double warp strand, weft of 20 count single weft pick :—

14 punja	*15 punja*
2 munda, 8 fanda of yarn for warp	3 munda of yarn for warp
1 munda, 4½ ,, yarn for warp	2½ munda of yarn for weft

3. Yarn of 34 count with double warp strand, weft of 20 count single weft pick

15 punja	*16 punja*
2½ munda yarn for warp	2 munda and 6½ fanda yarn for warp
2½ munda yarn for weft	2½ munda yarn for weft

4. Yarn of 26 count, double warp strand, weft of 20 count single weft pick.

14 punja	*15 punja*
2 munda, 6 fanda yarn for warp	2 munda, 8 fanda yarn for warp
2½ munda for weft	2½ munda for weft

5. Yarn of 20 count, single warp strand, weft of 20 count, also single pick

14 punja	*15 punja*
2¾ munda yarn for warp	2 munda, 6½ fanda for warp
2½ ,, weft	2¾ munda for weft.

6. Yarn of 60 count, double warp strand, weft of 40 count, double weft pick

18 to 20 punja	*21 to 22 punja*	*23 punja*	*24 to 25 punja*
3 munda for warp yarn, 58 fanda for weft	3 munda 2 fanda, warp, 57 fanda weft	3 munda 4 fanda warp 55 fanda weft	3 munda 6 fanda warp, 53 fand, weft

In this area cloths which can be woven in *punjas* ranging from 8 to 16 are ordinarily used. As was already stated, the thickness and thinness in weaving a cloth depends partly on the comb which is used for that purpose. If a piece of cloth 41 inches wide is to be woven in a yarn of 40 and 20 count respectively for warp and weft, warps ranging from 14 to 17 *punja* can be used. But as the *punja* of warp increases, the weaving gets denser and denser and more yarn is necessary.

As it has been stated already that the Bhulias are renowned for weaving beautiful floral, animal and line designs in yarn dyed in various charming colours, it would be better to give an economic account of their labour income for such kind of work.

The *saris* have different names based on different designs on the side and end borders. The beautiful designs are woven by the contrivance of heddles. The heddles increase as the designs get complicated. The names of different *saris* with beautiful border and end designs are as follows :—

Traditional designs according to side border :

1. Duifolia (dual-flower)
   a. Chari Badia (with 4 heddles)
   b. Panch Badia (with 5 heddles)
   c. Sat Badia (with 7 heddles)
   d. Das Badia (with 10 heddles)
2. Chandan Kora (sandal sweet) with 3 heddles (fulbadi)
3. Kakanpar one heddle (fulbadi)

4. Nagbandi six fulbadi (heddles)
5. Baulmalia (garland of flowers from Baul tree) 4 fulbadi (heddles)

The weavers design the end borders of the above with such designs as are appropriate to the side borders. The names of designs of the end borders are : 1. Kangta 2. Danti 3. Setari. The chart attached gives *saris* of different designs and the quantity of yarn used for weaving them, the number of days and persons required to finish them, and the market price of each. The other items such as count of the yarn and *punja* of warp are also given with the idea of making possible a calculation of the price of the yarn and estimating what quantity of yarn is necessary to weave a *sari* of given length and width. We know that one *punja* is equal to 15 *gandas* i. e. 60. Generally for a comb of 9 to 10 *gandas,* i.e. 36 or 40, one hank of yarn is necessary to weave a cloth of 39″ or 40″width. Thus by this formula they estimate what quantity of yarn for warp is necessary for a given number of *punja.*

Kulis :

The weaving of Kulis, so far as the pattern and design is is concerned, is more or less similar to that of Gandas. In some cases the Gandas know better weaving than the Kulis, but that is not generally the case. The economic status of both the groups of weavers is not equal, the Kulis are comparatively better off than the Gandas.

What does this study teach us ?

Weaving is one of our oldest and most common vocations. Of the three main needs of man, clothing is one. As time has passed, the mills have come to take the place of handlooms. In thinking of this one's mind becomes full of questions, such as follows. When mills will open in this area, what will happen to the handloom weavers ? What is the current tendency in the people's choice of cloth ? Is it towards homespun or towards the smooth, thin cloth of the mills ? At present there is no cloth-mill near this village, except one at Tora situated at a distance of 16 miles. This factory is run with handlooms,

Name of cloth	Name of end border	Size	Quantity of yarn used	Price	Punja	Count of yarn	Days taken	Value of cloth	Labour income	Income per day	Income per head
1. Duifolia Chari Badi 2 pieces white	Danti	8½ yds. long 40″ wide	6 munda	4-14-6	12-0-0	20 sing. warp and doub. weft	4	18	13-1-6	3-4-4	1-10-2
2. Duifoli Panch Badi 2 pieces white	Setari or Danti	8½ yds. long 40-41″ wide	6 munda 2 fand	5-4-3	12-13-0	30 doub. warp 20 ,, weft	4	20	14-11-2	3-10-11	1-13-5
3. Duifolia Sat Badi 2 pieces white	Kangla, Setari, Dauli	9 yds. long 40-41″ wide	6 munda 2 fand	5-5-0	12-13-0	30 doub. warp 28 ,, weft	5	25	19-11-0	3-15-0	1-15-5
4. Duifolia Das Badi 2 pieces white	Kangla, Setari, Dauli	9 yds. long 40-42″ wide	7½ mund	8-6-4	14-15-0	40 doub. warp 40 ,, weft	8	42	33-9-8	4-3-2	2-1-7
5. Chandan Kora 2 pieces white	Dauli	8½ yds. long 39-40″ wide	6 munda 2 fand	5-4-3	12-0-0	30 doub. warp 20 ,, weft	4	17	11-11-9	2-14-11	1-7-5
6. Kakanpar 2 pieces white	Dauli	8½ yds. long 39-40″ wide	6 munda	5-1-3	11-12-0	30 doub. warp 20 ,, weft	4	15	9-14-2	2-7-8	1-3-10
7. Nagbandi 2 pieces coloured	Setari	9 yds. long 41-42″ wide	7½ munda	7-7-11	14-15-16	40 doub. warp 20 ,, weft	5	21	21-13-1	2-11-3	1-5-7
8. Baulmalia 2 pieces white	Dauli	8 yds. long 39″ wide	6 munda	4-14-6	11-12-0	20 sin. warp 20 doub. weft	4	13	8-1-6	2-0-4	1-0-2

N. B. (1) The price of yarn was calulated according to price list given in report.
(2) In each case one man and one woman were engaged.

not with machines. However, persons of non-weaving castes are employed. The factory manager has also employed Ganda weavers of the locality on a 'putting-out' system. The manager supplies yarn to them and the weavers return with piece-goods to him.

Fifteen to twenty years ago when colours were not available in this locality, the background of the cloth was plain white. Women wore plain cloths with borders of old designs. When colour dyes such as blue, green, red and yellow, made in Germany and France, came to India, the weavers coloured their yarn but still wove *saris* with the old designs. The combination of colours with the old designs gradually ceased to please the taste of the wider public made possible by more modern communication. Somehow the old designs were replaced by new designs more suitable for weaving *saris* in different colours. Most of the rural women in villages around Barpali are still regularly using *saris* with old designs. But it is found that nearly 60% of the population of Barpali itself use coloured cloths with new designs and all these are the products of the Tora factory. A few rich weavers who are not weaving themselves, have employed Ganda weavers and instructed them to weave cloths with new designs in the borders. The rural weavers do the work and supply the shops of these people who dispose some of the cloths in this village and send the rest to neighbouring districts. In the village of Barpali, the women belonging to Kusta and Bhulia castes always use cloths with old designs which these caste people weave. On the whole, in this area, it can be said that women invariably wear handloom *saris* with new and old designs woven by local weavers. There are two cloth-shops having mill-made cloths to sell, but they only sell *dhutis* or men's wear and other garments and not a single mill-made *sari* is found there. Many businessmen come to the market held at Barpali with mill-made cloths but one never sees a single mill-made *sari* in their shops.

Men use mill cloths, but in rural areas almost all the labourers wear locally woven handloom cloths, though on festive occasions they buy mill cloths and wear them. The reason why women do not like mill *saris* is that they are fine

The following chart gives an idea of the lobour income of a weaver who weaves cloths of different sizes :—

Description of cloth	*Yarn required*		*Colour price*	*Yarn count*	*Punja*	*Persons engaged*	*Days taken*	*Value*	*Labour income*		
	Quantity	*Price*							*Total*	*Per day*	
										Group	*Per person*
2 pieces of plain cloth 2½ yds. × 27″	9 fand warp 9 ,, weft	0-15 0-15	16 or 12	16 or 12	8	2 women 1 man	2	5	3-2	1-9	0-8 4
		1-14									
2 pieces coloured	,,	,,	0-13-4	,,	,,	,,	,,	6	3-4-8	1-10-4	0-8-9
2 pieces plain 3 yds. × 34″	10 fand warp 9 ,, weft	1-0-3 0-13-6		16 warp 20 weft double	,,	,,	,,	8	6-2-3	3-1-1	1-0-4
		1-13-9									
2 pieces coloured 2 same sized	,,	,,	,,	,,	,,	,,	,,	9	6-4-11	3-2-5	1-0-10
2 pieces plain 3½ yds. × 32″	12 fand warp 12 ,, weft	1 4 1-2		,,	10	,,	3	10	7-10	2-9	0-13-8
		2-6									
2 pieces coloured same size	,,	,,	,,	,,	,,	,,	,,	11	7-12-8	2-9-7	0-13-10
2 pieces plain 4 yds. × 41″	13 fand warp 12 ,, weft	1-3-6 1-2		20 warp 20 weft double	12	,,	4	14	11-10-6	2-14-8	0-15-7
		2-5-6									
2 pieces coloured same size	,,	,,	2	,,	,,	,,	,,	15-8	11-2-5	2-12-8	0-15
2 pieces plain 4½ yds. × 42″	15 fand warp 15 ,, weft	1-10-3 1-4		40 warp 20 weft both double	14—16	,,	5	20	17-1-9	3-6-9	1-2-3
		2-14-3									
2 pieces coloured same size	,,	,,	2-5	,,	,,	,,	,,	22	16-15-5	3-6-3	1-2-1
2 pieces plain 5 yds. × 43″	18 fand warp 17 ,, weft	1-15-6 1-13-9		40 warp 40 weft both double	16—17	,,	6	26	22-2-9	3-11-1	1-3-8
		3-13-3									
2 pieces coloured same size	,,	,,	2-10-8	,,	,,	,,	,,	27	20-8-1	3-6-8	1-2-2

The price of yarn was calculated according to the following price list of yarn supplied by a dealer of this village. This list is the price per bundle of yarn.

Count	18 Nagpur mills	Retail rate Rs.	18-12-6	plus sales tax Rs.	0-4-9
,,	20 Coimbatur	,,	18-10-0	,,	0-4-9
,,	26 Cambodia	,,	21-15-6	,,	0-5-6
,,	24 Gokak	,,	19-7-6	,,	0-4-9
,,	30 Madura	,,	25-15-6	,,	0-6-6
,,	40 Special	,,	44-2-6	,,	0-11-0
,,	16	,,	16-0-0	,,	0-4-0
,,	12	,,	15-0-0	,,	0-3-9
,,	28	,,	25-0-0	,,	0-6-3

and mostly white. A fine *sari* does not protect the body unless some undergarment is used, to which the women are not habituated. Moreover the white cloths get dirty very soon. So they prefer handloom coarse *saris* to the fine mill-made ones. The colours that are used for dying are very attractive and durable. When the new colours first came to this area, the managers of weaving industries dyed the yarn and wove the cloths, keeping the Sambalpuri designs unchanged. These coloured cloths with old designs were new to the local people. They were very much attracted by these new cloths. Therefore the Bhulias had to give up weaving white cloths and used the factory colours, because they were now cheaper and easier to get and the laborious work of preparation was done away with. The managers of the weaving industries changed the Sambalpuri designs to new designs such as *Duifolia, Kumbha,* plain *Kumbha, Jekard, Bombay Mill* and *Madura Mill* patterns, to enliven and expand their business. As they produce cloths in large numbers, out of which a small portion may be absorbed in this locality, they export their goods. Therefore they modified the designs and in some cases changed them altogether according to the taste of the people living in the area to which they were exported. Now the coloured cloths of handloom factories with new designs on the one hand, and the coloured cloths of Bhulias with old designs on the other hand, are in competition, and the rural women of this area prefer the latter and the women who are advanced and do not belong to the weaver caste, prefer the former.

Regarding the economic condition of the four classes of weavers in comparison with that of merchants who do not weave themselves, we may say that the merchants own looms, hire men to operate them and sell cloth to dealers at wholesale rates. Having capital, the merchants can experiment with improved looms, develop new designs of cloth and sell to advantage. The independent craftsmen-weavers who buy yarn, weave it into cloth and sell them when or wherever they can. With their crude equipment they can no longer compete with even the improved handlooms. Many are hopelessly in debt. Moreover, they make a good sale of their goods only four months in a year,

and the rest of the year they live precariously without finding people to buy their cloths. At the difficult period when the sales come down to nothing, the weavers borrow money from the money-lenders to buy yarn and to meet their living expenses. Some also, who lack capital to buy yarn or cocoons, weave on contract with yarn or cocoons advanced to them by the merchants or by the dealers. All the cloths they produce are turned over to the merchants, and in return they are paid a wage. Though the merchants give them security at the difficult period by lending them yarn or cocoons, or money in advance, they do this for catching a big fish by baiting with a little one. If you ask what are the difficulties of these classes of weavers, they explain their felt difficulties and felt needs in the following way :—

1. They say they need money to buy yarn or cocoons and improved kinds of looms.
2. There is not a good market on which they can rely throughout the year for disposing of their piece-goods. They have to go to local markets and also to distant places carrying their things to sell.

Those who get yarn or cocoons in exchange for finished goods receive very little money for their labour. When there was communication and trade between Burma and India in pre-war times, the Kusta weavers sent large numbers of tassar and silk *saris* to Burma. There were some merchants belonging to Berhampur (Orissa) who stayed in this village and acted as intermedaries or middlemen between the weavers and the merchants of Burma. The merchants who lived in Burma were also people of Berhampur. When war broke out the merchants left Burma and came back to India. Thus this export trade broke down. Though silk and tassar *saris* now go to different parts of India, such as Calcutta, Madras and other parts of Orissa, there is no real organization to keep the supply of such kinds of cloths going regularly throughout the year. Whatever quantity goes outside the area are sent to fulfil personal orders and not for general purposes. The Gandas always complain about the supply of yarn to them. Though they each possess a ration card and are entitled to get yarn from the dealers at controlled prices, they always pay more

than the actual price to the dealers. The dealers insist on blackmarket prices, taking advantage of the illiteracy and simplicity of the weavers.

It may be said that weavers of all classes are uneducated, conservative and slow to take advantage of improvements. Many are intemperate and much of what little they earn is spent on liquor and jewellery instead of education and better food and other improvements in their trade. In summary, we may say that independent weavers suffer much distress and are facing a crisis. Weavers are living in this village and round about in large groups. The village of Barpali itself has a widespread reputation for silk and yarn cloths. But this reputation is now threatened. As the chief needs and felt needs of these weavers, beginning from Kusta to the Ganda weavers, are education, capital, a co-operative, and a good market, we might try to help them to solve their problems. They can start a co-operative which can easily be done if they understand the co-operative concept. The co-operative can take responsibility for tapping the reservoirs for education ; they may give up some of their bad habits, such as drinking and spending too much money on festive occasions and ceremonies. While trying to teach them to live a more temperate life and to make their weaving a true and sound cottage vocation, we might also try to encourage them to be more self-sufficient by taking up the spinning of the yarn. Thus they will be independent of the mills. This will also save them from the fluctuations of the market price and the difficulty which arises in times of scarcity or non-availability of yarn. The job of growing and spinning is not a new thing to these weavers. They were doing so some generations ago and only gave up raising cotton and spinning when the mill yarn captured the market.

AN ANTHROPOMETRIC STUDY OF THE NOLUAS OF BENGAL

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THE Noluas of Bengal form a socially compact group scattered over four districts (Jessore, Khulna, Faridpur and Nadia) of Bengal, manufacturing mats from reeds. Their total numerical strength is 1704 : 884 males and 820 females.

The paper contains a general survey of the physical characters of the Noluas based on 17 observations and 16 anthropometrical measurements. 250 subjects (adult) of whom 200 were males (50 in each district) and 50 females, were observed and measured by me. From these anthropometric data an attempt has been made to study their racial history.

The observations taken on them were as follows : skin colour ; hair form, texture, quantity and colour ; beard and moustache ; forehead ; supra-orbital ridges ; nasion depression ; nasal bridge ; nasal septum ; prognathism ; lips ; chin ; angle of lower jaw ; and body.

The measurements were taken according to the methods adopted by Martin and Sullivan and they have been studied in the light of the modern principles of statistics. The measurements taken on them were as follows : head length, head breadth, minimum frontal diameter, bizygomatic breadth, bigonial breadth, nasal height, nasal breadth, total facial height, upper facial height, external orbital breadth, orbito-nasal curve, horizontal circumference of head, head vault, head height, height vertex, sitting height vertex.

[1] M. N. Basu—Blood pressures of the Noluas of Bengal ; *Man*, July, 1938.

DESCRIPTIVE CHARACTERS

(Observations)

	Male		Female	
	No.	P.C.	No.	P.C.
		Skin colour		
Tawny white	5	2·5	2	4·0
Light brown	8	4·0	1	2·0
Pale yellow	5	2·5	4	8·0
Brownish yellow	12	6·0	6	12·0
Dark brown	112	56·0	26	52·0
Dark chocolate	32	16·0	5	10·0
Dark	26	13·0	6	12·0
		Hair		
Form—				
Straight	2	1·0	Nil	Nil
Wavy	198	99·0	50	100·0
Woolly	Nil	Nil	Nil	Nil
Texture—				
Coarse	9	4·5	4	8·0
Medium	150	75·0	40	80·0
Fine	41	20·5	6	12·0
Quantity—				
Normal	42	21·0	8	16·0
Medium	146	73·0	40	80·0
Thick	12	6·0	2	4·0
Colour—				
Black	188	94·0	47	94·0
Dark brown	11	5·5	3	6 0
Grey	1	0·5	Nil	Nil
		Beard and Moustache		
Amount—				
Scanty	10	5·0		
Normal	70	35.0		
Medium	88	44·0	Nil	
Thick	32	16·0		
		Eyebrows		
Scanty	126	63·0	45	90·0
Medium	50	25·0	3	6·0
Bushy	20	10·0	...	...
Connected	4	2·0	2	4·0
		Eye slits		
Straight	200	100·0	50	100·0
Oblique	...	...	...	...

	Male		Female	
	No.	P.C.	No.	P.C.
	Eye-fold			
Present	...	...	...	...
Absent	200	100·0	50	100·0
	Eye colour			
Iris—				
Brown	4	2·0	1	2·0
Dark brown	85	42·5	18	36·0
Black	100	50·0	30	60·0
Blue	11	5·5	1	2·0
Conjunctiva—				
Clear	180	90·0	47	94·0
Speckled	1	0·5	...	...
Yellow	10	5·0	1	2·0
Reddish	9	4·5	2	4·0
	Forehead			
Height—				
Low	16	8·0	2	4 0
Medium	162	81·0	47	94·0
High	22	11·0	1	2·0
Breadth—				
Narrow	8	4·0	3	6·0
Medium	172	86·0	46	92·0
Broad	20	10·0	1	2·0
Retreat—				
None	188	94·0	48	96·0
Marked slope	10	5·0	2	4·0
Medium	2	1·0	...	...
	Supra-orbital ridges			
Imperceptible	160	80·0	49	98·0
Trace	34	17·0	1	2·0
Moderate	6	3·0	...	...
	Nasion depression			
Shallow	20	10·0	4	8·0
Medium	156	78·0	38	76·0
Deep	24	12·0	8	16·0
	Nasal bridge			
Straight	102	51·0	28	56·0
Concave	18	9·0	3	6·0
Convex	70	35·0	16	32·0
Concavo-convex	10	5·0	3	6·0
	Nasal septum			
Horizontal	110	55·0	29	58·0
Directed upwards	12	6·0	5	10·0
Directed downwards	78	39·0	16	32·0

Prognathism

	Male		Female	
	No.	P.C.	No.	P.C.
Alveolar—				
None	194	97·0	48	96·0
Slight	6	8·0	2	4·0
Facial—				
None	160	80 0	47	94·0
Slight	21	10·5	3	6·0
Medium	19	9·5	...	...

Lips

	Male		Female	
	No.	P.C.	No.	P.C.
Thickness—				
Thin	20	10·0	8	16·0
Medium	175	87·5	41	82·0
Thick	5	2·5	1	2·0
Eversion—				
Absent	192	96·0	44	88·0
Slight	8	4·0	6	12·0

Chin

	Male		Female	
	No.	P.C.	No.	P.C.
Prominence—				
Prominent	181	90·5	44	88·0
Medium	19	9·5	6	12·0
Form—				
Oval	169	84·5	36	72·0
Round	14	7·0	8	16·0
Square	2	1·0	1	2·0
Pointed	15	7·5	5	10·0

Angles of Lower Jaw

	Male		Female	
	No.	P.C.	No.	P.C.
Sub-medium	4	2·0	2	4·0
Medium	195	97·5	47	94·0
Prominent	1	0·5	1	2·0

Body

	Male		Female	
	No.	P.C.	No.	P.C.
Musculature —				
Weak	5	2·5	2	4·0
Medium	30	15·0	42	84·0
Marked	165	82·5	6	12·0

The colour of the skin was observed in every male by exposing the chest, and in the females, the inside of the arms. The colour ranges from tawny white to dark (16—32), majority being from dark brown to dark (27—32)[2].

[2]Cf. Von Luschan's skin-colour chart.

The females seem to be lighter in complexion than the males.

From hair it is seen that they are a wavy haired (cymotrichous) people—in the case of the males 99% and in the females 100% wavy. Straight and woolly hair are unknown in the females, but in the males straight hair is seen (1%). The hair colour is black 94% both in males and females though dark brown and grey are often found in males. In females, grey colour is rare, and in those under my observation it is absent. The hair growth and texture are medium, 73 and 75, and 76 and 80 being their percentages in males and females respectively. On the face of the males the growth of hair is normal in 35% and medium in 44%. On the eyebrow of the males the growth is scanty (63%), and medium occurs in a fair quantity (25%); but in the case of the females it is scanty (90%).

The eye-slit is horizontal or straight. Oblique slit and eyefold are not met with in both the sexes. The colour of the iris in the males is black 50%, dark brown also occurs largely, 42·5%; and the blue colour is also markedly present, 5·5%. In the females black is 60%; dark brown, 36% and blue and brown, 2% in each case. As regards eye colour, Guha reports that the majority of the Bengalis examined by him have got dark brown eyes (Nos. 2 and 3 of Martin's eye colour chart)[3]. Guha also adds 'the Pods have either black or dark brown eyes; and there is a small percent of light clear brown (Nos. 6 and 7) among both the Brahmans and the Kayasthas'. The conjunctiva among the Noluas is clear 80% and 94% in males and females respectively, though yellow and reddish are not unknown both in the males and females. But the females have no speckled conjunctiva, and in the males it is only 5%.

The forehead both in the males and females is moderately medium, 81% and 94% respectively, though it not uncommon to meet with high 11% (males), 2% (females); broad 10% (males); 2% (females); low 8% (males), 4% (females); and narrow foreheads 4% (males), 6% (females).

The supra-orbital ridges both in the males and the females are not marked and remain imperceptible, 80% (m), 98% (f) in majority of cases, though traces, 17% (m), 2% (f) are not rare.

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[3]B. S. Guha—*Census of India*, 1931, vol. I, part 3, Ethnographical.

As to the nose, there is a prevalent tendency towards medium height of the bridge and it tapers towards the root in height. In shape the nose shows moderate individual variation. The prevalent shapes range from straight to concavo-convex with the occurrence of concave and convex separately. The inclination of the septum has also individual variation. In no case was a nose observed that could be termed 'thick' or 'thin'.

The nose is generally straight in both the sexes, 51% (m) and 56% (f), though convex noses, 35% in males and 32% in females are not an infrequent occurrence. The concave and concavo-convex also occur in small numbers. The nasion depression is medium 78% (m), 76% (f), though there are fair percentages of deep 12% (m), 16% (f) and shallow 10% (m) and 8% (f) roots. The nasal septum is horizontal 55% (m), 58% (f), though downward directions 39% (m), 32% (f) occur.

Alveolar prognathism is absent in the majority of cases, 97% and 96% in the case of males and females respectively. But facial prognathism is slightly more in evidence than alveolar prognathism. The lips tend to be slightly greater in fullness than among Bengalis in general but never approaches the thickness of the Negro. In general, the lips are medium 87·5% (m), 82% (f), with no eversion 96% in both sexes, though thinness and thickness occur. Their percentages are 10% (m), 16% (f) and 25% (m), 2% (f) respectively.

The chin is generally prominent 89·5% (m), 88% (f) and oval 84·5% (m), 72% (f). Sometimes fair percentages of pointed 7·5% (m), 10% (f) and round 7% (m), 16% (f), chins are also met with. The angles of the lower jaw are generally medium 97·5% (m), 94% (f) in nature.

Both males and females are well-proportioned and muscular. The body musculature of the males is marked, 82%, but of the females it is medium, 84%.

Considering the measurements, a table is prepared, which contains stature, cephalic index, altitudinal index, breadth-height index, upper facial index, total facial or morphological facial index and nasal index[4].

[4] Ranges are taken according to R. Martin
—*Lehrbuch der Anthropologie* Vol. I. pp. 198-202

TABLE I

	Males		Females	
	No.	P.C.	No.	P.C.
Stature				
Pygmy—x-129.9cm.	...	...	...	...
Very short 130·0 – 149·9	5	2·5	37	74·0
Short 150·0 – 159 9	151	75·5	13	26·0
Below medium 160·0 – 163.9	34	17·0	...	...
Medium 164·0 – 166·9	8	4·0	...	...
Above medium 167·0 – 169·9	10	5·0	...	...
Tall—170·0 – 179·9	2	1·0	...	...
Very tall 180·0 – 199·9	...	...	...	...
Giant – 200·0 – X	...	...	...	...
Cephalic Index				
Dolicho-cephalic X-75.9	30	15·0	10	20·0
Meso-cephalic 76·0 – 80·9	106	53·0	23	46·0
Brachy-cephalic 81·0 – 85·4	64	32·0	17	34·0
Altitudinal Index				
Chamae-cephalic X – 57·6	1	0·5	...	...
Ortho-cephalic 57·7-62·5	13	6·5	7	14·0
Hypsi-cephalic 62·6-X	186	93·0	43	86·0
Upper facial Index				
Hyper-euryen X-42·9	...	...	...	...
Euryen 43·0-47·9	2	1·0	...	...
Mesen 48·0-52·9	60	30·0	11	22·0
Lepten 53·0-56·9	110	55·0	31	62·0
Hyper-lepten 57·0-X	28	14·0	8	16·0

Total facial Index				
Hyper-euryprosop				
X-78·9	...	...	...	...
Euryprosop				
79·0-83·9	5	2·5	1	2·0
Mesoprosop				
84·0-87·9	62	31·0	10	20·0
Leptoprosop				
88·0-92·9	110	55·0	35	70·0
Hyper-leptoprosop				
93·0-X	23	11·5	4	8·0
Nasal Index				
Leptorrhine				
55·0-69·9	60	30·0	20	40·0
Mesorrhine				
70·0-84·9	128	64·0	28	56·0
Platyrrhine				
85·0-99·9	12	6·0	2	4·0
Breadth-height Index				
Tapeino-cephal				
X-78·9	16	8·0	8	16·0
Metrio-cephal				
79·0-84·9	182	91·0	42	84·0
Acro-cephal				
85·0-X	2	1·0	...	...

A table of different characters of the Noluas (male) is given below ;—
Statistical study of the data, No. =22

TABLE II

Size and sample 200 for all characters.

	Mean	S. D.[5]	C. V.[5]
Height vertex	157·18 ± ·03	6·12 ± ·01	3·60 ± ·01
Sitting height vertex	85·21 ± ·04	4·30 ± ·02	4·76 ± ·01
Head length	19·30 ± ·02	·51 ± ·01	3·37 ± ·02
Head breadth	14·80 ± ·03	·44 ± ·02	3·21 ± ·04
Min. Front. diameter	9·90 ± ·06	·41 ± ·02	3·03 ± ·08
Bizygomatic breadth	13·50 ± ·02	·32 ± ·01	2·71 ± ·03
Bigonial diameter	10·20 ± ·10	·51 ± ·06	3·37 ± ·04
Nasal height	4·60 ± ·04	·24 ± ·02	5·10 ± ·01
Nasal breadth	3·40 ± ·01	·19 ± ·02	5·58 ± ·01
Total facial height	11·60 ± ·02	·42 ± ·01	3·63 ± ·13

[5] { S. D.—Standard Deviation.
C. V.—Co-efficient of Variation.

Upper facial height	7·50 ± ·04	·22 ± ·03	3·28 ± ·04
Orbito-nasal curve	11·10 ± ·02	·35 ± ·01	3·15 ± ·11
External orbital breadth	9·70 ± ·03	5·71 ± ·05	5·16 ± ·13
Hor. circ. of head	51·20 ± ·04	4·29 ± ·02	4·14 ± ·10
Head vault	36·80 ± ·11	4·93 ± ·05	3·15 ± ·21
Head height	11·50 ± ·06	·31 ± ·03	2·86 ± ·18
Cephalic Index	76·68 ± ·01	2·50 ± ·20	3·27 ± ·02
Nasal Index	73·91 ± ·02	2·32 ± ·02	3·12 ± ·02
Altitudinal Index	59·59 ± ·03	4·24 ± ·01	3·15 ± ·11
Breadth height Index	77·70 ± ·02	3·27 ± ·01	5·23 ± ·08
Total facial Index	85·19 ± ·09	3·21 ± ·04	3·62 ± ·12
Upper facial Index	55·56 ± ·04	2·64 ± ·02	3 60 ± ·10

TABLE II(B)

(Females)

Size and sample 50 in all cases.

	Mean	S. D.	C. V.
Height-vertex	146·12 ± ·01	5·80 ± ·04	3·10 ± ·29
Sitting height vertex	70·02 ± ·02	·44 ± ·01	2·97 ± ·10
Head length	18·70 ± ·21	2·85 ± ·04	6·37 ± ·31
Head breadth	14·50 ± ·24	3·50 ± ·16	9·02 ± ·32
Min. front. diameter	9·72 ± ·01	·29 ± ·03	2·99 ± ·06
Bizygomatic breadth	12·90 ± ·06	·39 ± ·03	3·02 ± ·12
Bigonial diameter	10·81 ± ·01	·39 ± ·02	3·61 ± ·08
Nasal height	5·09 ± ·01	·28 ± ·08	5·50 ± ·16
Nasal breadth	3·74 ± ·01	·29 ± ·09	7·76 ± ·23
Total facial height	10·64 ± ·02	·26 ± ·01	2·45 ± ·01
Upper facial height	6·41 ± ·02	·24 ± ·01	3 75 ± ·12
Orbito-nasal curve	10·82 ± ·02	·35 ± ·01	3·24 ± ·14
External orbital breadth	9·83 ± ·02	5·21 ± ·02	4·56 ± ·18
Hor. circ. of head	53·41 ± ·03	6·55 ± ·02	3·40 ± ·20
Head vault	36·52 ± ·02	2·85 ± ·04	6·37 ± ·16
Head height	10·61 ± ·01	2·51 ± ·02	3·26 ± ·06
Cephalic Index	77·54 ± ·02	3·00 ± ·12	3·87 ± ·11
Nasal Index	74·00 ± ·02	2·32 ± ·20	3·17 ± ·02
Altitudinal Index	56·88 ± ·03	1·31 ± ·02	1·94 ± ·15
Breadth height Index	73·10 ± ·01	3·00 ± ·03	3·88 ± ·12
Total facial Index	82·17 ± ·05	4·94 ± ·03	5·33 ± ·02
Upper facial Index	49·61 ± ·02	·41 ± ·04	5·81 ± ·03

From the frequency distribution of stature of the Nolua males it is seen that the mean value of stature is 157·18 cm., the

minimum being 149·0 cm. and the maximum 171·0 cm. and the range of variation is 22·0 cm. The highest number is at 157·0 cm. Similarly the frequency distribution of stature of the Nolua females shows the mean value as 146·12 cm. It varies from 142·0 cm. to 153·0 cm., the highest number is at 146·0 cm.

The frequency distribution of cephalic index of the males gives the mean value 76·32. It varies from 71·0 to 86·0, the maximum number is at 77·0. On a similar basis the distribution of the female shows 77·50 as the mean value. The range of variation is from 72 to 85, the maximum value is at 77·0.

The frequency distribution of nasal index of the males shows that the mean value is at 73·35, the minimum being at 61·0 and maximum 89·0. The highest number is at 69·0 and 74·0 respectively. Again from the female frequency distribution it is seen that the mean value is 74·22, the minimum is at 65·0 and the maximum 86·0, the range of variation is 21 and the highest number is at 67·0.

From a study of the frequency distribution it is found that 57·5% of the males and 100% of the females are of short (below 158·0 cm.), 40·5% of medium (158-168 cm.) and 2% of tall above 168 0 cm.) stature ; 40·5% males and 28 % females are dolichocephalic (below 77·0), 49·5% males and 48% females are mesocephalic (77·0-82·0), 10·0% males and 24% females are leptorrhine (below 70·0), 66·0% males and 54·0% females are mesorrhine (70·0-85·0) and 4·0% males and 6·0% females are platyrrhine (above 85·0) ; while 91·0% males and 84·0% females are hypsicephalic (above 63·0), 8·0% males and 16% females orthocephalic (58-63) and 1·0% male only platycephalic (below 58) Thus the data indicate that the Noluas are not a homogeneous stock. This is also verified from the table prepared by Mahalanobis. He has prepared a table to test homogeneity and heterogeneity of a group of people by the co-efficient of variation (C.V.) . Thus according to him a table is prepared[6].

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[6] P. C. Mahalanobis—*Analysis of Anglo-Indian Head length*, p. 135,

TABLE III

C. V.	Males	Females
2-3·0	2	4
3·0-3·5	9	6
3·5-4·0	4	3
4·0-X	7	9

In the case of the males out of 32 characters 7 are highly mixed, 9 and 4 are partly mixed and mixed, and 2 remain pure. But in the case of the females 9 are highly mixed, 6 and 3 are partly mixed and mixed, and 4 remain pure. Thus it can be said that the group is a mixed one.

It is found that the greatest concentratation is at C.I. 77 which comprises 58·5% subjects. Of these it is again seen that 52 have fine noses of whom 50 are of short and 2 of medium stature.

26 of these have medium noses (N. I. 70-85) and these 26 are of medium stature, In the flat nosed (platyrrhine) group (N. I.85-100) there are 5 subjects of whom 4 are of short and 1 tall stature.

Similarly it is found that a minor concentration is at C. I. 82 where there are only 13·0 subjects. Of these 22 have fine noses (leptorrhine) of whom 19 are of short, 2 medium and 1 of tall stature ; 4 have broad noses and of these 2 are of short 2 medium stature.

Though the minor concentration should be at C. I. 82 but this element is not practically negligible and has not great importance on racial history. A chart consisting of stature, cephalic index and nasal index after Haddon is given below[7].

TABLE IV

	Males		Females	
	No.	P. C.	No.	P. C.
S D P	15	7·5	5	10·0
S D M_1	4	2·0	...	...
S D L	5	2·5	2	4·0
M D M_1	2	1·0	...	...
M D L	3	1·5	1	2·0

[7] Characters of the females are not discussed here as the numbers are only 50. They are given in a tabular form after Haddon.

T D M_1	2	1·0	...	...
T D L	1	0·5	...	...
S M M_1	92	46·0	20	40·0
S M L	20	10·0	7	14·0
M m M_1	18	9·0	4	8·0
M m L	15	7·5	6	12·0
T m M_1	5	2·5	...	...
T B M_1	4	2·0	...	...
T B L	6	3·0	2	4·0
M M L	8	4·0	3	6·0

S.—Short.
M.—Medium.
T.—Tall.
D.—Dolichocephalic.
m.—Mesocephalic.
B.—Brachycephalic.
P.—Platyrrhine.
M_1.—Mesorrhine.
L.—Leptorrhine.

According to Haddon the characters, short and medium stature, dolichocephalic and platyrrhine elements are identified with the Pre-Dravidians. He further adds that the Dravidians are characterized as short or medium statured, dolichocephalic, leptorrhine. The pure type of Haddon's Pre-Dravidians is present among the Noluas (both males and females). In the case of the males it is 7·5% and in the females 10·0%. But a blend between the Pre-Dravidian and Dravidian stocks may probably be identified with short and medium stature, dolichocephalic, and mesorrhine nose. Here in the case of the males it is found that the blends of the Dravidians and the Pre-Dravidians as mentioned above are present 3·0% (m) and 2·0% (f).

Again it is found that short and medium stature, mesocephalic and mesorrhine elements are present, both in the case of the males and females. Their percentages are 55·0 and 54 ·0 respectively. This may be identified as a result of intermixture between the Pre-Dravidian and the Dravidian elements on the one hand and an Alpine or a Pamirian element on the other.

The character, tall or medium stature, brachycephalic and leptorrhine nose are the *Homo Alpinus* of Lapouge. The Alpine element is found to be 7·0% in the males and 10·0% in the females. Thus it is seen that the Nolua group is highly mixed.

This has been verified in the case of inter-racial likeness of 4 different districts.

A group of divergence (D^2)[8] is taken with the different 4 districts, according to P. C. Mahalanobis, (with a formula $D^2 = \frac{1}{p} Sp \frac{(mpq - m^1pq)}{\delta p^2} - \frac{1}{p} Sp\left(\frac{1}{npq} + \frac{1}{n^1pq}\right)$, D = group of divergence, p = number of characters, m = mean of qth sample of the p the character of the first, m' = mean of the second one, δp = mean standard deviation of both characters, n = number of first individuals, and n' = number of second individuals) and coefficient of racial likeness (C^2) used by Morant, Pearson and others is also considered[9].

A table consisting of D^2 and C^2 is given below :—

	D^2	C^2
J. N[10].	3 07	29·49
J. K.	0·30	2·81
J. F.	3·09	28·99
N. K.	2·90	23·71
N. F.	1·52	17·72
K. F.	3·53	33·24

From the above figures it can be said that the relationship between Jessore and Khulna is very great, next to that is Nadia and Faridpur, then Nadia and Khulna and so on.

Dutta wrote in 19?6, 'Coming directly to the somatology of the people of Bengal, it is to be found that the Bengalees are on the average mesocephal-mesorrhine-medium sized persons'[11]. But from our measurements, we find that the Noluas of Bengal are a predominantly short statured, mesocephalic and mesorrhine people.

[8] P. C. Mahalanobis—On tests and measures of group divergence, *J. A. S. B.*, Vol. XXV, 1930 p. 580.

[9] *Biometrika*, Vol. XIV, p. 194.

[10] J = Jessore, N = Nadia, K = Khulna, F = Faridpur.

[11] B. N. Dutta—Peoples and castes of Bengal, *Science and Cultnre*, August, 1936 p. 74.

A NOTE ON THE KURS AND SUB-KURS OF THE ARLENGS (MIKIRS)

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Introduction

THE following attempts have so far been made to enumerate and identify the *kurs* and sub-*kurs* of the Arlengs (Mikirs):

(i) Mr. Edward Stack (1882-3): from Duar Baguri in Nowgong district of Assam.

(ii) 1891 Census Report of Assam: while concurring in essence with that of Mr. Stack, this latter is much more exhaustive.

(iii) Rev. P. E. Moore (1902): his representation follows an altogether different line and the enumerations do not tally with any other investigation. Sir C. Lyall had, of course, compared the data of Stack with those of Moore and thereby tried to explain the ambiguity of the report of Moore.

(iv) Mr. W. C. M. Dundas (1905): gave a still more enlarged list of the main exogamous groups of North Cachar Mikirs. While the enumeration and identification of the main groups show practically complete agreement with Stack and the 1891 Census Report, there is a wide variation with regard to the subdivisions of these groups.

(v) Sir Charles Lyall (1908): the material collected by Stack was edited and arranged by Lyall.

Stack collected his data from north and north-west (Nowgong) and Dundas from south and south-west (N. Cachar Hills) of Diphu, the H. Q. of the Mikir Hills District. In December, 1952, the writer conducted enquiries among the Mikirs of Diphu and Sariahjan, in the United North Cachar and Mikir

Hills District. The data on *kur*-groupings and their smaller units were collected by the writer at Diphu from Shri Keshab Timung (50) and Shri Sarbura Ronghang (55), and had these verified by Shri Bepar Terang (70) at Sariahjan. The writer found that the Mikirs of Diphu and Sariahjan have the same *kur*-groupings, but the numbers and the names of the *kurs* vary moderately from those of Stack and Dundas.

Purpose of study

The general report on *kur*-groupings was first reported by Stack seventy years ago. The purpose of the present investigation is to furnish a plausible explanation of the wide diversity in the names and numbers of sub-*kurs* (which, like *kurs*, are equally exogamous). Attempts will be made to ensure that this explanation 'fits' the condition of new settlements on the north-eastern slopes of the Mikir Hills.

Enumeration of sub-kurs

The *kurs* are the exogamous groups of the Mikirs and sub-*kurs* are the parts of the larger groups, i.e., *kurs*. Under each principal *kur* the sub-*kurs* vary greatly in name and number. From the composition and accepted names of the sub-*kurs* it is evident that the formation of any sub-*kur* did in no way interfere with the intrinsic relation between the main *kur* and its subdivisions. From the enumeration of sub-divisions (given below) under each *kur* it will be clear that each subdivision is distinguished by a special sub-name attached to the name of the original *kur*. It seems that there is no precise rule in adding a sub-name, since these sub-names refer in many cases to certain local individual or objects, e.g., *Pator* : a village official (adopted from Khasis) ; *Dera* : a place name ; *Keleng* (Kiling ?) : a river name ; *Ingti-Kiling* and *Ingti-Chinthong* : local names of subdivisions ; *Ronghang* and *Lindok* : local names ; *Terang* : bachelor's house, *Timung-Kiling* : a local name related to a river, etc. Thus it is difficult to define a sub-*kur* except as special sub-names attached to the names of *kurs*. The *kurs*, as such, have an existence—and can be identified—only in and through the sub-names appropriate to

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it ; the sub-*kur*, in other words, is not an entity standing apart from and opposed to its *kur*. It was found that the members of the sub-*kurs* never disregarded one another. They genuinely believe that they belong to the same *kur*, irrespective of the apparent difference in the names of sub-*kurs*.

Classification of data

The different *kurs* and their sub-groups are listed here. The data were collected by different investigators at different times and places. For a ready comparison the relevant data have been arranged below, whereas Dundas's data have been somewhat condensed, eliminating the more elaborate groups of the sub-divisions.

I. *E-jang* exogamous group : This group has been represented by Stack as *Lekthe* which appears to be, on the other hand, one of the sub-*kurs* of *E-jang* in the data of the writer. Moore had also given the name of *E-jang* as the main exogamous group.

STACK	MOORE	DUNDAS	PAKRASI
Lekthe	*E-jang*	*Inghi*	*E-jang*
Hanse	Hanse	Hanse	Hanse
Tutso	Tutso	Tutso	Tutso
Bongrun	Bongrung	{ Bongrung	Bongrung
Kramsa	Kramsa	{ Kramsa	Kramsa
	Rongpi	Rongpi	Rong-pi
	Ronghang	Ronghang	Ronghang
	Lekthe	Lekthe	Lekthe
	Rongchehon	Inghi	Inghi
	Keap		Keap

The data of the writer appear to agree most closely with Moore except in *Inghi* and *Rongchehon*. In this connection it may be pointed out that the statement of Lyall about this exogamous group that, '*Lekthe* is said to have been the military

clan', could not be verified by informants of the writer. They could not agree with the functional status of this *E-jang kur.*

II. *Timung* exogamous group : The list of *Timung-kur* and sub-*kurs* are given below.

STACK	MOORE	DUNDAS	PAKRASI
Timung	*Tung-e*	*Timung*	*Timung*
Tokbi	Tokbi	Tokbi	Tokbi
Sengnar	Timung-Senar	Chinthing-Seng-ar	Sengnar
Rongphar	Timung-Rongphar	Rongphar	Rongphar
	Timung-Kiling	Kiling	Kiling
	Timung-Phangchu	Phangchu	Fungchu
	Toktiphi	Rongpi	Tokchiki
	Timung	Timung-Lindok	Timung
	Timung-Juiti	Meji	Derrah
		Dera	
		Yachi	
		Longteroi	
		Pator	
		Phura	

The further division of sub-divisions of the *kur*, as recorded by Dundas, could not be collected from the informants of the writer who think that Lyall was right in remarking, 'Several of the remainder (of the sub-divisions of Dundas - the writer) appear to be local names'. Lyall also reported that *Timung* people represented no special functional status like that of the *Lekthe* people. The writer could also collect nothing in regard to this information from the informants. It seems that the plurality of names of sub-*kurs* may be due to the selection of names of common objects or individuals by the Mikirs.

III. *Ingti* exogamous group : Stack had reported about this *kur* and Dundas named this exogamous group as

Kathar which is but a subdivision in Stack's information. Moore referred to this *kur* as *Ni-e*.

STACK	MOORE	DUNDAS	PAKRASI
Ingti	*Ni-e*	*Kathar*	*Ingti*
Taro	Taro	Taro	Taro
Katar	Ingti	Ingti-Kathar	Kathar
Hensek	Ingleng	Hensek	Hensek
Ingleng		Ingling (Hempi and Hemso)	Ingleng
		Ingti-Kiling	Kiling
		Ingti-Chinthong	
		Riso	

The writer's data concur aptly with that of Stack, save in the case of *Kiling*. Moore did not refer to *Kathar*. Lyall said that *Kiling* was definitely a local name. The informants of the writer said that this *Ingti kur* was the 'superior' exogamous group according to the origin of all *kurs* of the Mikirs. The information seems to be convincing since Lyall had also remarked, 'Ingti is said to have been in former times the priestly clan.'

IV. *Terang* exogamous group : Both Stack and the writer gathered the name of *Terang*, but Dundas gave the name of *Be* which is one of the sub-divisions in the data of Stack and the writer. Moore termed it as *Lo-e*.

STACK	MOORE	DUNDAS	PAKRASI
Terang	*Lo-e*	*Be*	*Terang*
Be	Be	Lindok	Kro
Kro	Kro	Kuru	Kro
Ingjar	Ingnar	Terang	Ingjar
	Terang	Seng-ot	Terang
	Ingjai	Ronghang	Ingjai
		Kiling	

Dundas gave the names of *Lindok*, *Kiling* and *Ronghang* in this *kur*, but these names could not be asserted from the informants of the writer and these appear to be the local names. His *Kuru* is definitely *Kro* of other investigators. About *Ingjar* and *Ingjai* Lyall remarked, 'Mr. Stack gives

Ingjar as a sub-division of Terang ; the census list also classes *Injai* under the same main group. Mr. Dundas notes that the Injai may not take a wife from the Be (*i. e.*, Terang) group, from which it may be concluded that they are really a sub-division of that name, or Terang.' Dundas reported *Injai* as a main exogamous group. Stack said that Terang people claimed the dignity of the priestly clan, but the informants of the writer did not support this view of Stack. They said, on the other hand, that *Terang kur* might come next to *Ingti kur* in status among the Mikirs.

V. *Teron* exogamous group : The absence of this name from Stack's report suggests that he might have taken *Teron* and *Tirang* to be the same ; this confusion can be well understood if one observes that these two words, unless very clearly pronounced, are likely to appear to be identical.

MOORE	DUNDAS	PAKRASI
Kron-e	*Teron*	*Teron*
Teron	Kiling	Teron
Teron-Kongkat	Kongkar	Kongkat
Teron-Langne	Langne	Langne
	Milik	Milik
	Meji	
	Mele	

The sub-*kurs* are fewer under this *kur*. *Kongkar* of Dundas may be *Kongkat* of Moore and the writer. The informants of the writer could not agree with Dundas that *Kiling*, *Mele* and *Meji* should be the sub-*kurs* of this *kur* of *Teron* and it seems that these names are also local names.

Thus the Mikirs are divided into five main exogamous groups or *kurs*. The precise enumeration of sub-*kurs* under a *kur* presents difficulty ; for, the informants do not concur on the extent to which a *kur should be* subdivided. This difficulty cannot be overcome by subjecting the area-wise data to the routine methods of elimination and cross-checking, and we may trace this to the ignorance of the objective principle of sub-dividing a *kur*. With a view to cutting across the routine-methods, the writer had straight away asked his informants (Bepar Terang and Keshab Timung) why there might be such

a disparity in the names and numbers of sub-*kurs* as reported in different investigations. The result was negative ; neither of the informants could enumerate the factors they themselves believed to be responsible for the disparity. But while they groped for an 'explanation' of this wide diversity, they threw light on certain issues which may be reconstructed and co-ordinated into a tentative explanation.

Tentative Explanation

This tentative 'explanation' raises immediately two issues which are related to the more fundamental factor, viz., geographical dispersion. Geographic or spatial movements were accelerated in the past on account of two important causes : (a) acute shortage of cultivable land and (b) dissension groups of Mikir folks.

(a) A hill-tribe as they are, the Mikirs had a life closely conditioned by a hilly terrain that governs their means of subsistence ; there is acute shortage of permanently cultivable tracts in a hilly region. They naturally adopt the practice of jhumming or shifting cultivation. By virtue of this method of producing their subsistence, the Mikirs are always on the look-out for virgin sites where a new rotation of jhumming can be performed. It means that they have to trek through inaccessible hills and dense undergrowth. With the tools and arts at their disposal it is no easy task for them. Thus, the net result of (i) natural growth and (ii) the practice of jhumming accumulates in a centrifugal dispersion of the Mikirs : they can never afford to live sufficiently long in one particular place in large numbers. This is how new settlements come into being in different sites whenever the population becomes more than *optimum* in relation to the actual means of production. The spatial movement was thus never stopped since the principal means of subsistence remained unaltered.

With, and at the head of, each new settlement there would be inevitably a new *Gaonbura* (headman)—a successful leader—after whom the settlement would be named. It is striking to note that even now Mikirs name their 'villages' or settlements after the *kur* and the name of the village-headman.

The leader of a new settlement might adopt, as a mark of distinction, a new name as a suffix to the main *kur* name which he and his family members and his followers might belong to. To put it more precisely, a leader originally belonging to the main *Ingti kur* might adopt *Kiling* as a suffix to *Ingti* as a mark of distinction, and his family members and descendants and even his followers and their descendants would, henceforth, be known as members of *Ingti-Kiling* or simple *Kiling*. Thus *Kiling*, hereafter, would be taken as a sub-*kur* of the main *Ingti kur*. Now *Kiling* by itself carries no distinctive meaning ; in Mikir it generally denotes a river. *Ingti-Kiling* then, may be taken to mean—'members of *Ingti-kur* who resided by the side of the river (*Kiling*)'. Similarly, other sub-*kur* names might have originated in that manner in order to satisfy what may be called the 'distinction-complex' of the successful leaders and headmen of the new settlements.

(b) Beside the shortage of cultivable land, the movement of the Mikir folks might also be traced to another factor 'In the hills the cultivable land, at the first settlement of a village in a new locality, is divided among the householders by the *me*, or village council, presided over by the *gaonbura*, the head of each household choosing his own land for cultivation, and any dispute being referred to the *me*. Should the dispute not be settled in this manner, the majority prevails, and the dissident households, if they do not acquiesce, may remove elsewhere and set themselves up as a new community with a *gaonbura* of their own',

This new community under a new headmen might, later on, be distinguished from the other settlements according to that 'distinction-complex' of the new headman who might think it necessary to adopt a new suffix to the original *kur* name for identifying himself and his followers. The basic adherence to and respect for the original *kur* name are not violated. The name of the sub-*kur* might, in other words, have been adopted only as a mark of distinction, retaining, of course, the full identity and allegience of the members of the newly-formed sub-*kur* with the corresponding *kur*.

Reference : *The Mikirs* by Edward Stack & Sir Charles Lyall : 1908.

JUVENILE DELINQUENCY IN CALCUTTA*

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THE present enquiry on the probem of juvenile delinquency in Calcutta was started in July 1951 under the guidance of Prof. K. P. Chattopadhyay. Permission was taken from the Government of West Bengal to visit the Record Room of the Chief Presidency Magistrate's Court in Calcutta (popularly known as the Bankshall Court), wherein the case-records of the juvenile offenders who are tried in the Central Children's Court at Entally are kept.

The case-records include (1) the Police Challan (report), containing the name, age and other particulars of the offender, description of the offence committed, (2) Probation Officer's report to the Presidency Magistrate (the trying judge of the Central Children's Court), containing detailed particulars of the offender and his family history obtained through a personal enquiry from the house of the offender by the Probation Officer concerned, (3) Progress of the case date by date and the observations of the Magistrate, and finally (4) the Judgement of the Magistrate. In many records, however, the information given is insufficient or the Probation Officer's report is absent; in some records, many other papers and evidences, containing the statements of the witnesses, description of articles, etc., found in possession of the offender during arrest, are attached.

A chart was made on the following lines :

(1) Particulars of the offender, including the Probation Officer's report, if available, (2) Nature and description of the offence, (3) Progress of the case, date by date (ignoring minor and unnecessary legal details), orders by the Magistrate and finally, the judgement by the Magistrate, (4) Comments, if neces-

*Communicated by Prof. K. P. Chattopadhyay.

TABLE I

Community, Social Group and Sex.

	No.	Percent.
1. Hindu	859	76·97
2. Muslim	249	22·32
3. Christian	8	·72
4. Bengali	726	65·06
5. Non-Bengali	390	34·94
6. Male	1050	94·09
7. Female	66	5·91
8. Total Cases	1116	100

Nature of Crime.

	No.	Percent.
1. Pick-pocket	54	4·84
2. Ordinary theft	333	29·84
3. Theft as servant	40	3·58
4. Burglary	33	2·95
5. "Black-marketting" essential commodities	481	43·10
6. Sexual offence	4	·36
7 Excise Act violation	11	·99
8. Serious theft	43	3·84
9. Suspicious movement or Trespass	62	5·56
10. Breach of trust or escape	11	·99
11. Petty case	×	×
12. Causing hurt or injury	7	·63
13. Falsification of ration cards	13	1·16
14. Damage to property and Explosives Act	8	·72
15. Selling without license	2	·18
16. Gambling	5	·45
17. Security Ordinance	1	·09
18. Cheating and Forgery	7	·63
19. Children's Act	1	·09

Conditions of Living.

	No.	Percent.
1. Living with family	456	40·86
2. Homeless	660	59·14

Punishment Ordered.

	No.	Percent.
1. Discharged after admonition	754	67·56
2. Fine or Confinement.	1	·09
3. Reformatory School	58	5·2
4. Custody of relations	47	4·21
5. Discharged for lack of evidence	237	21·24
6. Absconding	18	1·61
7. Retrial	1	·09

sary. One thousand case-records were examined in the Chief Presidency Magistrate's Court during the period July '51 to December '51 and necessary data were noted in accordance with the above chart.

A careful analysis of the above data was made in the months of January '52 to March '52 and after tabulating the results of analysis, the following picture of the situation was brought out :

TABLE I(A) (Excluding the Cases Under Section 7(1), E. S. Act '46.)

	Nature of Crime.	Number	Percentage
1.	Pick-pocket	54	8·5
2.	Ordinary theft	333	52·44
3.	Theft as servant	40	6·3
4.	Burglary	33	5·2
5.	Sexual offence	4	·63
6.	Excise Act violation	11	1·73
7.	Serious theft	43	6·77
8.	Suspicious movement or Trespass	62	9·76
9.	Breach of trust or escape	11	1·73
10.	Causing hurt or injury	7	1·1
11.	Falsificatfon of ration cards	13	2·05
12.	Damage to property and Explosives Act	8	1·26
13.	Selling without license	2	31
14.	Gambling	5	·79
15.	Security Ordiance	1	·15
16.	Cheating and Forgery	7	1·1
17.	Children's Act	1	·15
	Total Cases	635	100

TABLE I(B) (Only 'Theft cases').

1.	Pick-pocket	54
2.	Ordinary theft	333
3.	Theft as servant	40
4.	Burglary	33
5.	Serious theft	53
	Total	508
	Total 'Theft cases'	508
	Percentage	70·21

The number of delinquents in Calcutta on the basis of the one thousand case records during the above period was found to be 1116, as noted. In some case records, the number of offenders was more then one per case ; in some, juvenile offenders were

mixed up with adult offenders (arrested together and the Police challan included both), and in some records, the case had to be transferred against the name of the surety (usually a pleader or mukhtear), who bailed out the accused (such cases are referred as mis. cases). In many cases, the Police challans are very inadequate in the matter of information. Sometimes they provide what seems to be inaccurate data or too generalized descriptions. Comments, such as, 'habitual criminal', 'member of a notorious gang', 'homeless' (without careful enquiry), or 'loitering in a suspicious manner', etc., are some illustrations of such remarks. More than 43% of the cases, as will be evident from Table I, fall under violation of the Essential Supplies Act (i. e.) black marketting or smuggling of essential commodities like rice, wheat, sugar, etc.) and peculiarly enough, the Police challan describes most of such offenders as 'homeless in Calcutta' or 'vagabond'. But, it is a matter of common knowledge that these boys or girls come from the outlying rural areas round Calcutta and sell those articles to the people of Calcutta, and most of these boys have their homes in villages. Such data obviously vitiate the results, but for preparing a rough and preliminary background of the problem, inclusion of all cases was unavoidable. Generally, the Probation Officer's reports are somewhat more informative, but such reports are not always submitted or avilable in all cases. The second table shows the class of offences committed, excluding the smuggling of food materials. Also the total 'theft cases' are given separately. They form 79·21 percent of the the total cases.

Another chart was prepared on the following lines to obtain more information after a further analysis of the data :

A. *Time of Occurrence* : This was divided into :

1. Morning, 2. Noon, 3. Evening, 4. Late night.

B. *Day of Occurrence* : This was studied under the heads :

1. Weekdays, 2. Week-end (Saturday, Sunday and Holiday).

C. *Age-group of Culprit* : These were classified under the heads :

1. 8 years to 12 years.
2. 12 years to 16 years.

D. *Economic Condition* : This was studied on the basis of father's income and any other income of the family :

1. Rs. 0-50/-.
2. Rs. 50/- to Rs. 100/-.
3. Rs. 100/- to Rs. 200/-
4. Rs. 200/- above.
5. Beggars, etc.

E. Occupation of the Father of the Delinquent :

F. Family condition : The points noted were whether ;

1. Both parents were dead.
2. Father was dead.
3. Mother was dead.
4. There was a step-father.
5. There was a step-mother.

G. Occupation of the Delinquents.

H. Number of times arrested.

The data regarding (a) Time of occurrence, and (b) Day of occurrence is presented in Table II.

TABLE II

(Incidence of crimes in different periods of the week and in different parts of the day)

		Week-end & holidays	Weekdays	Morning 5 a.m. to 12 noon	Noon 12 to 4 p.m.	Evening 4 p.m. to 10 p.m.	Night 10 p.m. to 5 p.m.
Total cases	Number	372	689	441	208	282	106
	Percentage	35·1	64·9	42·5	20·1	27·2	10·2
		(Total cases-1061)			(Total cases-1037)		
Only E.S. Act cases	Number	184	288	247	81	139	2
	Percentage	17·34	27·14	23·81	7·81	13·4	·19
Excluding E.S.Act cases	Number	188	401	194	127	143	104
	Percentage	31·92	68·08	34·15	22·36	25·18	18·31
		(Total cases-589)			(Total cases-568)		

* Total cases do not tally with the total number of delinquents, as in some cases, the full data is lacking.

The other data are shown in the following tables

Age-group

		No.	Percent.
1.	Below 8 years	11	2·42
2.	8-12 years	139	30 62
3.	12-16 years	304	66.96
	Total ...	454	100

Economic Condition

		No.	Percent
1.	Beggar	6	5·56
2.	Rs. 0 to Rs. 50	31	28·70
3.	Rs. 50 to Rs. 100	51	47·22
4.	Rs. 100 to Rs. 200	19	17·59
5.	Rs. 200 above	1	00·93
	Total ...	108	100

Delinquent's Occupation

		No.	Percent
1.	Servant	29	14·95
2.	Vagabond	29	14·95
3.	Hawker or Seller	14	7·22
4.	'Orphan'	3	1·55
5.	Apprentice or Manual labourer ...	29	14·95
6.	Apparently Gang-member (Report of P. O.)	76	39·18
7.	School student	10	5·15
8.	Beggar	4	2·06
	Total ...	194	100

Family Condition

		No.	Percent
1.	Both parents dead	27	5·01
2.	Father dead	398	73·84
3.	Mother dead	16	2·97
4.	Step-father	5	0·93
5.	Step-mother	5	0·93
6.	Parents living but separated ...	4	0·74
7.	Both parents living	84	15·58
	Total ...	539	100

Literacy of Delinquents

		No.	Percent
1.	Illiterate	66	50·38
2.	Mere knowledge of alphabets ...	3	2·29
3.	Just literate	45	34·35
4.	Up to Class VII	17	12·98
5.	Matriculate	×	×
	Total ...	131	100

Number of times arrested

			No.	Percent
1.	Twice	... ...	24	63·16
2.	Thrice	... ...	3	7·89
3	Four times	... ...	2	5·26
4.	Several times (actual number not noted)		9	23·68
	Total	...	38	100

Father's Occupation

				No.	Percent
1.	Domestic Servant		... ...	9	7·26
	Male	3			
	Female	6			
2.	Clerk		... ...	×	×
3.	Hawker		... ...	5	4·03
4.	Worker		... ...	25	20·16
	(a) Day-Labourer	9			
	(b) Coolie (Porter)	6			
	(c) Monthly or weekly paid	11			
5.	Artisan or Technical work		...	15	12·1
6.	Agriculturist		... ...	10	8·06
	(a) Day-labourer	3			
	(b) Farmer	6			
	(c) Owner-farmer	×			
	(d) Landlord	1			
	(e) Landlord's assistant	×			
7.	Businessmen or Trader		...	24	10·85
	(a) Small	17			
	(b) Middle	7			
	(c) Big	×			
8.	Intellectual Profession		...	4	3·23
	(a) Teacher	2			
	(b) Priest	×			
	(c) Doctor	2			
	(d) Lawyer	×			
	(e) General	×			
9.	Unemployed		... ...	3	2·42
10.	Beggar or Vagabond		... ...	1	0·81
11.	Service		... ...	28	22·58
	(a) Menials	8			
	(b) Clerks and Sub-ordinates	13			
	(c) Officers	2			
	Total		...	124	100

Tabulation of data on other items as shown in the above chart did not reveal a clear picture because, in many cases, the data itself are lacking, incomplete or beset with inaccuracies. However, certain broad facts emerge from the tables inspite of their obvious limitations :

(1) The age-group, 12 to 16 years, gives a greater number of offenders than the age-groups below that. 66.96 percent of the total 454 delinquents whose age was noted belong to the former group.

(2) The lower income group below Rs. 100/- has provided 81.48 percent of the delinquents out of a total of 108 cases whose economic condition could be assessed. Poverty is seen to be an important factor in the problem.

(3) All the major professions of society contribute delinquents, more or less. Still those professions which are economically 'low' in status and culturally less advanced figure prominently in supplying such offenders.

(4) Evil association or gang-life contributes notably in the development of juvenile delinquency. As many as 39.18% of the 194 cases where the occupation of the delinquent could be noted fall under the above group. Lack of suitable employment and the conditions of domestic service are good breeding-grounds of delinquency and such association. Together they form 33.51% of the total cases.

(5) The death of the father has apparently had an important effect through lack of home-training and resultant delinqueney. 73.84% of the 539 cases where the condition of the family could be noted fall under the group 'Father dead'. The loss of the father, who happens to be the main earner in the family in our society, brings a significant change in the stability of the family set-up and consequently the children of the family face serious handicaps in their growth and development. Such a situation easily leads the young boys to defiant behaviour. The loss of mother, whose economic status as an earner is insignificant in our society, is not so conducive a factor in the matter of the growth of delinquency as is evident from the figure.

(6) Repetition of offence by a delinquent is not absent. The figure for boys twice arrested is very high (63.16%). The total cases, where such data could be noted, are of course very few (only 38).

(7) Illiterate or just-literate children provide a considerable number of delinquents ; together they form 74.73% of the total cases where such data could be noted. Lack of education, it appears, is an important factor in the development of the problem.

The conclusions are very general in nature, as the data are not adequate ; still they are significantly revealing. Poverty, lack of education, lack of home discipline and care due to death of the father, and bad company seem to be the main factors associated with juvenile delinquency.

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BOOK REVIEWS

Bengal under Akbar and Jahangir: An Introductory Study in Social History. *By Tapan Kumar Raychaudhuri, Lecturer, Calcutta University. A. Mukherjee & Co. Ltd., 2 College Square, Calcutta 12. August, 1953. Price Rs. 12 only. 6″ × 9″, viii + 247 pp.*

The period covered by the book lies between 1575 and 1627. Even before that time, Mohammedan rule had entrenched itself firmly in Bengal, and in spite of the bigotry of the Pathan rulers, a rapproachement had been virtually effected between the culture of the people in general and that which had come in the wake of the conquerors. Mughal rule had in the meanwhile weakened the authority of the Afghan rulers, with the result that Bengal had practically become torn into a number of small principalities. There was no peace in the land, and the life of the people lay practically at the mercy of the contending war-lords. But during the period under review, the land was more or less successfully consolidated under Mughal supremacy. The integration may not have been perfect, but the strong hand of the Delhi rulers brought peace where there was insecurity ; and this proved to be very helpful for the economic recovery of the province.

Another event of great future potentiality took place during this time. It was the advent of the European traders who began to play a progressively increasing role in the economic and cultural life of the people. The first among such powers who established their control over the seas round Bengal happened to be the Portugese. They had their settlements in ports up the rivers ; and with their superior organization and armaments, they often happened to defy the central authority of the Muslim rulers. This practically opened the way for the later introduction of Dutch and English interference in the economic and political life of the country.

Prof. Raychaudhuri has gathered with great industry evidences regarding the life and culture of Bengal during this significant period. He has reconstructed with admirable care a picture

of the condition of the rich and the poor, described in detail their dress and habitations, pleasures and religious observances, while giving us at the same time a more or less satisfactory picture of production and trade, and of the part played in these matters by different social groups present in the country. We notice for instance how the part played by the Portugese traders and adventurers opened up larger markets, both inland and overseas, for the manufactures of Bengal, how under their influence, Christianity was forced upon the inhabitants, and how slavery and slave-trade became a baneful characteristic of Bengal's unhappy life. We also observe incidentally how, under the influence of Muslim rule, the dress of men and women belonging to the richer classes had already become modified to a considerable extent from what it had been during the reign of the Hindu rulers of old.

With regard to literature and culture in general, Prof. Raychaudhuri has been equally painstaking in his search for facts. He has exercised praiseworthy discrimination in their selection and interpretation. The period in question had been preceded by the time when Chaitanya lived and died. Brahminism in the time of Chaitanya, had become dominated by a defensive attitude in respect of Islam's political and cultural influences. This had given rise to a puritanic, formalistic emphasis upon rituals. As such, it might have satisfied the vanity of some people, but Brahminism of this kind evidently failed to satisfy the spiritual longings of the people. That need was apparently satisfied in part by particular Sakta sects and partly by a debased form of popular Buddhism. It does very much credit to the writer that he has tried, in a very fair manner, to assess the part played by the neo-Vaishnava movement in this sphere of the life of Bengal. The latter, we are told, succeeded in releasing the springs of creative energy, and in bringing a healthy moral tone where it was lacking. A new phase thus opened in the history of religion as well as of literature. At a later stage, Vaishnavism may have encouraged the growth of the softer, and more effeminate, qualities but its civilizing influence cannot be held to have been small on that account.

Some will not perhaps agree with Prof. Raychaudhuri's

description of mysticism in the Vaishnava cult ; but no one will deny the fact that he has tried to be fair and just while presenting a staightforward, commonsense view in regard to certain esoteric thoughts and practices of the Vaishnavas.

He has also tried to show successfully how the revolutionary potentiality of neo-Vaishnavism in its social and cultural aspects was slowly smothered by a return of orthodoxy under the leadership of the professors of Brindaban. On the lower level, again, the cult was invaded and corrupted by what remained of the Sahajiya sect, and thus carried into the blind alley of personal satisfactions, devoid of very much social significance.

One question which has appeared to the reviewer to be of some significance should perhaps be stated here. This is not so much in order to find out what the writer has not said or done, but more to serve as a suggestion for future investigators in the field.

The question is, how does the rise itself of Vaishnavism, with its revolutionary potentiality, match with the prevailing character of the age ? The age was undoubtedly one of stagnation and decay, in which the little strength which yet remained in Hinduism found expression in a defensive psychological attitude which drove cult after cult into the blind alley of personal satisfaction. How then does the rise in question stand in relation to the prevailing temper of the age ? Were the two independent variables, or was one the product of the other, even if that were by reaction ? What is it in the human soul, or let us say, in human history, which gives rise to potentially creative movements even in the midst of death and decay ? And does this take place *always* ? Is there any law in this respect ?

These are, of course, larger questions, and in a work devoted to a painstaking accumulation of facts and of their impartial assessment, one need not look for anything which takes us beyond the range warranted by the professed limits of the book. But the reviewer has merely ventured to draw attention to the presence of these problems in relation to the subjects which have been described and discussed in the book.

One should perhaps end here with a genuine appreciation

of the fine study presented by the author, as well as of the very satisfactory job turned out by his publisher.

N. K. Bose.

A Text-book of Human Psychology. *By Peter Mckellar, M A., Ph. D. Cohen and West Ltd., 39 Percy Street, London, W. 1. 384 pp.*

The book presents to the reader a complete outline of all the fields of psychological investigation. In this respect it rightly deserves the merit of a complete text-book. While narrating the recent developments of outlook and research it does not ignore the past achievements of different schools of psychology, viz., Structural, Behavioristic, Gestalt, Analytical etc. On the other hand, it actually describes the link of the past with the present in a historically systematic way.

The special merit of the book lies in its freedom from bias towards any particular line of psychological thought. It critically assesses the contribution of each school towards the advancement of the science of psychology as a whole. The contents are more than preliminary. While preliminaries are not overlooked, they are cast in a new pattern consistent with the body of knowledge as it has been enriched by modern researches, and the significance which the latter have acquired in relation to the different aspects of human affairs. As the author himself puts it, 'An introductory paragraph precedes each chapter and is designed to place the content of the chapter within the wider perspective of the subject as a whole'. This is a special feature of the book conducive to the proper grasping of the mutual interrelationship of the different themes, viz., motivation of behaviour ; perception ; learning ; remembering, imagery and imagination ; intelligence and ability ; unconscious mental life ; personality ; social structure and functioning etc.

The range of themes shows the author's sincere attempt at integrating the complex specialized studies which apparently seem to baffle such an undertaking. When we trace the history of psychology we find isolated growth and development of special branches of the science. Since 1879 or earlier,

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experimental psychology had been mainly concerned with the study of the individual, his perception, emotion, motivation, learning etc., as conscious psychological processes. Then the epoch-making discoveries of Freud and his disciples brought to light the dynamic existence of unconscious mental processes and their importance and influence in the structuring of personality and social behaviour. The present generation of psychologists, while drawing upon the past main streams, is more inclined to an integrated organization of the psychological concepts evolved in the different fields of enquiry, to an abstraction of inter-relationship among them and to the building up of a complete scientific system which seems to operate at these levels of human existence, viz., human organism with its basic needs, drives and satisfactions ; human personality with its unique traits not similar with other personalities living in the same society ; and human social behaviour with its uniform responses to social norms and appreciation of social values in common with the members of the same society to which it belongs. The author throughout the book has exhibited this modern tendency and succeeded in presenting a really broad based and balanced account of human psychology.

It is really a great advantage for a student of psychology to receive introduction not only to a general knowledge of all the branches of psychology but also to the fundamental relation underlying the different aspects and directions of human mind and behaviour. The book fulfils this purpose in a very expert and illustrative way and goes as far as the interactions between the individual and group life or society. The author shows in a convincing manner the tremendous effects of social structures like status and roles on the modification of attitudes and behaviour. In the last chapter he describes the human organism in action in social relations manifested in coercion, cooperation, competition, accommodation and social conflict. He is right when he puts emphasis on the fact that the psychologist by virtue of his special knowledge has definite functions in society. While admitting the value of original research he lays special stress on the dissemination of the conclusions unanimously arrived at by psychologists.

As the author himself admits, 'While it is hoped that the book will be of interest to the general reader and the first year student some knowledge of elementary psychology has been assumed'.

R. K. De.

Social Psychology. *By W. J. H. Sprott ; Publishers : Methuen and Co. Ltd., London ; 268 pp.*

Our present civilization is passing through a crisis of disintegration, disorder, and dissolution. It is now than ever before that we should have a better understanding of social behaviour and situations, with a view to controlling their trends towards desired consequences. The time has come when an accurate assessment should be made of the contributions of sciences towards a scientific understanding of the dynamic interrelations in human society working at vital levels of existence, viz., social, economic, political etc., and measures that are amenable to application to social groups for modification or reorientation of the existing social codes and norms which have been discovered to be the root causes of conflict and instability. Instances such as race prejudice, religious fanaticism, economic inequality etc , may be cited which, though accepted criteria in particular social groups, have caused havoc in the history of mankind.

The book gives real insight into the nature and complexity of the problems and unveils the inner meaning of the socially approved attitudes and behaviour. It surveys in its limited compass all the major concepts and researches in the field of social psychology. The concise elucidation of the problems directly related to social psychology in the truest sense of the term has given a distinctive mark to the book. Acquaintance with the fundamental principles so far evolved in social psychology will be helpful for a thorough appreciation of the book, though there is no barrier for a general reader in finding the book interesting.

In the first part of the book the author deals with the study of the groups. Here he describes various group formations, formal and informal. Description, in a very neat way, of con-

crete social situations and behaviour culled from actual and commonplace life, by way of illustration to topical discussion, gives a tangible identity with the reality of the themes presented. The nature and the attributes of mass-society, social class, field dynamics and topology, sociometry, systematic study of groups, crowds, leadership, public opinion, and attitude research are the subject-matters of this part. The results of researches in respect of them are reproduced in as clear a way as possible.

In the second part the author turns to the study of the individual and society. Here he shows in the first place how the influences of society go to modify or give a definite orientation to the natural faculties of mind, viz., perception, intelligence etc. Next he proceeds to the study of culture and the development of personality; how cultural inhibition and facilitation influence the structuring of personality at different stages of growth, beginning from infancy to adulthood passing through childhood and adolescence. From this critical study of interaction between cultural products and institutions and personality formation in individual life the author has attempted to launch upon a cultural analysis and showed the emergence of national character, basing his observations always on the findings of the socialization of personality under different circumstances in different societies. He takes special cognizance of economic factors in the shaping of personality and national character in general.

Finally, in the third and last part of the book the author deals with the possible applications of social psychology. Beginning from its philosophical applications he points out its suitability in application to medicine and delinquency.

The book is well planned, language expressive, simple, precise and measured, and exposition lucid and easy. The beauty is that a common man feels at home with the men and social situations described in it, and so it paves the way to a smooth understanding and acquiring a prompt insight into the laws and trends of social relations described in the book.

R. K. De.

From Black to White in South Australia. *By Ronald and Catherine Berndt, with an Introduction by Prof. A. P. Elkin. F. W. Cheshire, Melbourne. 1951. 313 pp.*

In this volume, the authors have presented a scientific and carefully prepared picture of the results of contact between the primitive tribes of Australia and European settlers. The Southern Australian State was chosen for investigation because of the presence of 'various trends modified in some degree by environmental factors'. The work is based not only on field investigation, but archival records which have been freely used for purposes of study. Indeed this forms one of the outstanding features of the book.

The book is divided into eight chapters, namely, The Aborigines ; The Background of the present-day Attitude ; To-day, an Outback Area II ; N. S. Australia ; A Settled Country Area ; An Urban Area ; Conclusion. We are first of all given a brief picture of the indigenous culture. Then comes a description of the important aspects of contact, dealing specially with present-day attitudes and trends. This is followed by a description of the disrupting influence of missionary activity in the two marginal states. Chapters VI and VII deal with a settled country area, Murray, and the urban area.

As we go through the book, it appears that the aboriginal problem has been very acute in Australia ever since the beginning of European colonization. The reason was that the rapid expansion of the colonists deprived the aborigines of their means of subsistence. This led to inevitable clashes in which the poor natives were worsted by the better armed and more numerous colonists. In 1870, the colonists adopted a 'policy of protection', this being followed in later times by a 'policy of intelligent parasitism'. Modern studies have revealed that the policy of protection failed in its purpose ; and so from 1930, every effort is being made to civilize the aborigines and grant them the right of citizenship. The prevailing tendency among the natives is however one of willingness to accept privileges while refusing to shoulder responsibilities. Quite a number of them show an unwillingness to merge themselves completely

within some form of European culture. The authors have expressed the opinion that the observed resistance would perhaps have been less if some of the original culture elements of the natives had been allowed to survive. Europeanization is bound to take place under the circumstances present in Australia ; but unnecessary resistances could have been avoided through a wiser and more sympathetic approach.

In India, we have problems of our own in relation to the tribal people. Although the approach of Hindu culture in respect of tribal civilizations has been, on the whole, much more sympathetic than that exercised by Europeans in relation to the Australian people, yet, it cannot be said that our solution has been an ideal one. The tribals who were absorbed in Hindu society, and even those who contributed substantial elements in the formation of what is popularly known as Hinduism, have quite often been relegated to a low status in society. In former times, again, the spread of Hinduisation took place slowly. But under the stress of modern conditions, the tribal people who still inhabit some of outlying portions of India are being very rapidly drawn into the vortex of modern life. Under these circumstances, we believe that our administrators have much to learn from a perusal of the book under review. It is of the greatest significance to the future of India that studies of the above kind should be initiated in respect of those portions of India where rapid disintegration of tribal cultures is taking place. The purpose should be not merely to suggest the preservation of whatever exists in aboriginal culture, but how the simple and the more advanced peoples of India can profit by one another's aid and co-operation, so that some of the follies perpetrated by Europeans in Australia or by our own predecessors in India can be avoided in the furture.

It is with this end in view that we strongly recommend the present volume to those interested in the welfare of India's tribal population, as well as those who wish to find a way through which the science of Anthropology can be made to serve the larger interests of mankind in general.

S. R. Das.

The Sacred State of the Akan *By Eva L. R. Meyerowitz, Faber and Faber Limited, London, 1949. 229 pp.*

Akan Traditions of Origin. *By Eva L. R. Meyerowitz, Faber and Faber Limited, London, 1950. 149 pp.*

These are two of the contemplated three volumes to be published on the history and ethnology of the Akan. The first volume deals primarily with the Akan state. It is divided into twelve sections describing the concept of the state and its basic organization ; the Queenmother, the owner of the State ; the King, the Ruler of the State ; the Supreme Deities ; the Doctrine of Immortality ; Symbolism ; the Ntoro cult ; the State god Tano ; the Calendar ; State Festivals and Ceremonies ; the City, and Gold. A study of the Akan State as has been pointed out by the author throws light on the sequence of four different cultural phases. These are : (a) the Queenmother as a sole life-giver and ruler of the State ; (b) the Queenmother and the King, her son, as the joint life-giver ; (c) the decline of the Queenmother's power ; (d) the King as the war-lord and ruler of a State based on territorial and military confederation, accompanied by further decline of the Queenmother's power. In the early home of the Akan (Sudan), this sequence has been completely broken by the introduction of Islam which destroyed the matrilineal institutions. But their influence can still be traced in many aspects of the social pattern. The glossary of terms is very exhaustive, which is essential for going through the work. Two maps of the Gold Coast, one of 1300 to 1500 and the other of the 19th century, have further added to our geographical knowledge of the area. Above all, the book has been greatly enriched by more than 101 well-produced illustrations. The illustrations on symbolic designs are very significant as they give us an insight into the folk art and the artistic merit of the people of the Gold Coast.

The second one of the series is no less interesting, as it deals with the history of the Akan as reconstructed from the oral traditions current among the people. It is divided into four parts : Part I deals with the early kingdoms north of the forest

zone ; Part II with the small States of the coastal region ; Parts III with the great States of the forest region ; and Part IV with the States of the western forest r-egion.

The volume gives us a historical account of all these States as can be gleaned from the traditions passing from mouth to mouth and from generation to generation. In this respect the author has done a most valuable service by recording these traditions before they disappeared completely from memory. These traditions are primarily heroic songs dealing with the achievements of past kings, sung by minstrels in accompaniment with various musical instruments. Besides, nobles and officers of the courts have also preserved in their memory the glorious tales of their predecessors. These traditional songs and tales form the data from which a historical account has been reconstructed.

The Akan people originally migrated from the region between Djenne and Timbuktu and became the founders of the various States of the Gold Coast. Towards the end, the author has given us a chronological account of the foundation of these States from 1000 to 1700. There are altogether six appendices giving a list of kings and queenmothers. The volume contains 8 well-produced maps showing the geographical position of the Gold Coast, routes of migration, various states, trade routes, etc.

On the whole it is a very satisfactory piece of work which gives us an insight into the early traditional history of the Akan. Both the volumes will be of great help to students of history and ethnology, particularly to those who are interested in African studies. We shall eagerly await the publication of the third volume in the series.

S. R. Das.

Seven Tribes of British Central Africa. *Edited by Elizabeth Colson and Max Gluckmnn ; Published by Oxford University Press, 1951, 409 pp. Price 37s. 6d.*

This volume contains seven articles written by seven different authors meant to convey a broad idea about the social struture of seven tribes of British Central Africa. The tribes are the

Lozi of Barotseland, the Plateau Tonga, the Bemba, the Ngoni, some 'Shona' tribes, all belonging to different parts of Rhodesia, the Nyakyusa of S. W. Tanganyika and the Yao of Southern Nyasaland. The papers are the result of field-work carried out individually by the respective authors. Five of these papers represent 'an early result of the enlarged research scheme of the Rhodes-Livingstone Institute'. To which two papers, one on the Bemba of north-eastern Rhodesia by Dr. Audre I. Richards and the other on Nyakyusa of south-western Tanganyika by Mr. Godfrey Wilson, have been added.

The main purpose of this publication is 'to produce a general description for each tribe which might be useful to government officers working in the region and which could be used by students of anthropology who wished for some knowledge of the types of social organization to be found in the area'. This has been more or less fulfilled, specially through the addition of numerous maps, diagrams, photo-plates and an uptodate bibliography for each tribe.

Actually the seven papers do not deal with seven independent tribes. For example, the paper on the Shonas actually deals with a number of tribal peoples named separately. And it has been said, 'From the outset it is useful to know that the tribal communites mentioned above are fragments of what were probably once greater centralized units occupying certain portions of Southern Rhodesia'. Classification of such communities needs ethnological support which has also been given by the author. From the anthropological point of view we are interested to know something about the forces which led to such divisions and their inter-relations, questions which have unfortunately been kept outside the scope of the book.

An inclusion of the study of tribal interactions and inter-relations would have perhaps increased the value of the book.

The editors have admitted in the preface the reason why the separate papers could not all be brought up to exactly the same standard ; but we do hope it will be possible to do so in future publications of the Institute.

G. S. Ray.

Babylonian and Assyrian Religion. *By S. H. Hooke. Published in Hutchinson's University Library : World Religions. Edited by Professor E. O. James. London, 1953. 128 pages including appendix, bibliography and index. Price 8s. 6d.*

The study of Babylonian and Assyrian civilization has shown how history can be reconstructed by scientific digging. Little more than a century ago next to nothing was known of this great civilization. Excavations brought to light after centuries of oblivion the vast treasures of the Tigris-Euphrates valley. Work at the sites is still going on and while new sites are being discovered, books on this region get out of date. But the new material is mostly buried in the pages of learned journals and is not easily accessible to the general reader. It is the purpose of this book to bring out the salient features of the specialized knowledge for the benefit of those who have neither time nor the capacity to go through the bigger books. Within the short compass of about a hundred pages, the author has dealt with all the important aspects of Babylonian and Assyrian religion without sacrificing accuracy at the altar of generalization.

A study of ancient religions, specially those revealed by excavations and other authentic sources is as important for the student of anthropology as for a student of comparative religion. If anthropologist are going to treat historical societies for which adequate and authentic information is available on a par with the societies covered by field-work monographs, the study of ancient religions cannot be neglected. Prof. Hooke has rightly observed in the introduction that 'a Babylonian myth may be as worthy of study by an anthropologist as an Ibo myth for the light it may throw on man's early reactions to his environment and his early social patterns.' (p. x) For a correct picture of Babylonian religion, one need not now turn to books of Robertson Smith who on the strength of material available in his day said that mythology was not an essential part of religion. Modern researches have revealed that myth held the central place in the religion of the ancient dwellers of Mesopotamia.

Babylonian religion was a magico-religious system based on the fear of evil spirits and other incalculable elements in the

social environment. For the ancient Babylonian, human society was merely a part of the larger society of the universe. Every stone, every tree, and every conceivable thing was a being with a will and character of its own. The art of the exorcist was in constant demand. The publican whose business was declining, the courtesan whose attractions were waning, the farmer who wanted more rain or who wished to avoid a plague of locusts, the courtier who wished to obtain favour at court, all employed his services. There was appropriate ritual and incantation for every situation.

For the anthropologist interested in the study of primitive religions the book is important as he is apt to find many parallel phenomena in the cultures he studies. Some of the explanations given in this book may serve to throw light on many problems in his own field.

Sachchidananda.

A Hundred Years of Anthropology. *By T. K. Peniman, M. A., F. S. A., Curator, Pitt Rivers Museum, Oxford, 2nd Edition 1952. Published by Gerald Duckworth & Co. Ltd., London. Price 30s. 512 pp.*

This excellent monograph is one of Duckworth's *The Hundred Years Series.* The first edition of the book was published in 1935. In the present edition, the book has been revised and considerably expanded. It has been divided into six parts. Part I deals with the scope of Anthropology; Part II with, what the author has described as the Formulary Period, i. e., Anthropology before 1835; Part III, with the development of Anthropology between 1835-1859, i. e., the period before the publication of Darwin's *Origin of the Species*; Part IV, with the most fruitful period which practically saw the growth and maturuity of the science as we know it now; Part V with the period between 1900-1935 which the author calls, the Critical Period; and finally, Part VI, with the development of Anthropology since 1935.

From the aforesaid description, it will be apparent that the book covers the whole field of Anthropology, beginning with the Greek philosophers down to our present time. The

author has dealt with the origin and development of anthropological science in all its manifold aspects, in historical sequence, beginning with the earliest mythical conception of man's origin and diversity right up to the latest researches, e. g., finding human affinities by the blood-group tests. And still the book is not a mere enumeration of scientific discoveries and events, but a comprehensive treatise on Anthropology. The author has inserted short biographies of persons occupying an honoured place in the history of the science and allied fields, thus adding much to its reading interest. Full references have been given to every important fact, so that any reader wanting to know more about any particular fact can easily look up the required book for further information. Nor has the author confined himself to the four corners of what may be called Pure Anthropology. In the book he has given us the latest information on allied sciences, bearing on the science and knowledge of Man, like Biology, Psychology, Archaeology, Palaeontology, etc. In one place, (p. 242) the author modestly says, 'If this book can do no more than to make workers in special fields aware of what is going on in some other fields, it will yet perhaps have served a useful purpose'. After going through the whole of the book, one may say without hesitation that the author has ably fulfilled his task. He has descibed the progress towards understanding what Man is, in his physical, mental and emotional make-up. Then he has described the progress of Man's cultures, past and present, as revealed by sociological and archaelogical investigation. Finally, he has dealt with the progress in the knowledge of his environment, the medium in which Man lives and acts, embracing geographical and economic studies. The book is thus an encyclopœdia of anthropological knowledge and no serious student of the science should fail to read the book. The bibliography given at the end of the book, covering more than 40 pages, appears to be very complete.

P. K. Mitra.

The Makah India : A Study of an Indian Tribe in Modern American Society. *By Elizabeth Colson. Manchester University Press, Manchester, 1953. Price 25s. xvi+315 pp. including appendix, bibliography and index.*

The 'Makah' of Neah Bay, Washington are an Amerindian community of nearly four hundred souls mostly living within their reservation which occupies the north-western tip of the Olympic peninsula jutting out into the Pacific Ocean. Across the Strait of Juan De Fuca less than ten miles away lies the Vancouver Island. Miss Colson went among the Makah for making some culture and personality studies. But during her stay her interest in the Makah themselves grew to such an extent that she eventually produced what she calls, 'a picture of a modern American group faced with the problem of understanding its position within American society.' (p. vi)

This work is an interesting commentary on the Indian policy of the United States government. For generations government agents have laboured to mould the Makah to a pattern imported from beyond the limits of their own society in order to enable them to take their place as members of a larger society than their own group. The United States Indian service was for many years instrumental in devising ways and means which were expected ultimately to lead to the extinction of American Indians as a people and to their absorption into the general body of the nation. The policy they employed was one of assimilation rather than of acculturation.

Before white contact, Makah culture was very similar to that of other Nootka groups. They spoke a dialect of the Nootka language. Political organization was based on villages and lineages. There was no clan system. They lived in five winter villages. In summer they moved to three villages near the coast for fishing halibut. In the fall they camped in smaller groups along the rivers running into the ocean and the strait to exploit salmon fisheries. They went back to their permanent villages in winter for their round of feasts and ceremonials.

Makah society was stratified into three classes : chiefs, commoners and slaves. Property in fishing grounds, berry patches

and coastal strips was vested in lineages and controlled by lineage heads. Three secret societies which had both men and women on their rolls controlled religious and curative functions in the tribe. Salmon, halibut, whales and seals were caught in plenty. The Makah were an aggressive warlike people and raided their neighbours for captives and heads of victims.

By a treaty with the United States the Makah were forced into the reservation covering 36 square miles in 1855. An officer was appointed to supervise their interests and to civilize them generally. In 1863 the Commissioner of Indian Affairs spoke of his policy as one designed 'to civilize and reclaim the Indians within our borders and induce them to adopt the customs of civilization' (p. 11). Their hereditary customs and manners and their language were suppressed. Activities of ceremonial or ritual nature were stopped. Potlaches, gambling games and dances were prohibited. Native doctors were threatened with jail if they continued to practise their art. Even the morality of the people was sought to be improved. Strict monogamy was enforced. Men and women who lived together without legal marriage had to get married or go to jail. Warfare and feuds were forbidden and slavery was abolished. One agent wrote in 1890, 'all heathenish and barbarous practices I have endedvoured to stop and where possible prohibit altogether (p. 17). And all this was done without investigating into the social functions of the practices concerned.

Young children in school were indoctrinated with white culture. Nothing but English was allowed in social intercourse. Even dress and house-keeping were remodelled. Boarding schools were made popular. Gradually all people became Christianized though without force. The new generation was taught to regard their own elders as ignorant and superstitious barbarians whose advice should be ignored,

In 1934 the Indian policy of U. S. changed. Each tribe in a reservation was allowed to assume political and economic control over its internal affairs as complete as that of any incorporated municipality. Three years later the Makah obtained charter by which they were allowed a fair degree of autonomy in the managemenr of their own affairs for a period of seventy years

as a subject people. But the Makah are very sceptical of the success of this new policy of relaxation.

The Makah are an altogether peculiar people. They are not distinguished from other people by their physical appearance or by the possession of a common language or a common culture. Nor are they descended from a common ancestor. They are not a segregated group isolated from social contacts with foreigners. Nevertheless they are conscious of their own identity. Culture, heredity or residence is not their only binding tie. The Makah are a community by political definition. Those people who are descendants of the free inhabitants of the villages of Cape Flattery area and whose claims to membership are not in conflict with enrolment in some other tribal group are Makah.

In the reservation the Makah are in daily contact with the white, both permanent and transient. The permanent white settlers hold positions in the economic, educational and religious organizations of the village. Transient whites come to do odd jobs for a short period. The Makah and the whites meet everyday informally on the streets, shops and restaurants and formally in church, school and wedding parties. There is no overt expression of social segregation. But its covert expression is the absence of intermarriage as the socially approved pattern. It prevents the appearance of members of different groups in the same familial structures. Intermarriage is not condemned though it is frowned upon. There is no subordination of one group by the other despite the existence of some discrimination. The whites are not in a position where they can discharge their aggressive feelings directly against the Makah, for the former are aliens in the reservation and are liable to eviction in case of bad behaviour.

Beneath the apparent good will subsisting between the Indians and the whites, there is an undercurrent of antagonism between them. The Indians accuse the whites of having robbed them of their valuable possessions including land and their harvest of sea. Ancient grouses are remembered and the U. S. government's policy misconstrued. The Makah feel insecure before the aggressive intentions of the whites. In the cultural field they are conscious of the losses they suffered due to the systematic stamping out of their own individual culture. The whites are disliked

because they are thought to be snobs. The Makah are conscious of the distinctness of their group from the general American population. Some of them take pride in identifying themselves with other Amerindian tribes in U. S.

Though the Makah are all Christians, they see themselves surrounded by a world of power, forces and spirits which can influence life directly and whose presence can be felt. These spirits or forces are not moral beings but sources of power. There is no attempt to receive the traditional religious concept of the people. 'Instead the Makah have found their belief, not incompatible with close association with whites in the same Christian organization' (p. 279).

Miss Colson's work is a severe indictment of the American Government's policy of assimilation which has apparently failed in its objective because the Makah still think of themselves as a group distinct from the whites. The book may be classed with such community studies as Redfield's in Mexico, Warner's in the United States, Embree's in Japan etc. Another feather to the cap of the author is the treatment of Indian—White relation in the reservations, This broadens our knowledge of race relations in America. The study of group stereotypes makes those chapters realistic.

The value of the book would have been enhanced by the inclusion of some photographs.

Sachchidananda.

The Early Brahmanical System of Gotra and Pravara. (*A translation of the Gotra-Pravara-Manjari of Purusottama-Pandita) with an Introduction by Dr. John Brough, M.A., D.Litt. Published by the Syndics of the Cambridge University Press. xviii + 228 pp.*

The *Gotra-Pravara-Manjari* of Purusottama Pandita is one of the important Sanskrit treatises on the *gotra* and *pravara* system in Ancient India. Purusottama is undoubtedly a medieval writer(not later than the twelfth century A.D.), but the importance and chief merit of his work lies in the fact that it quotes verbatim the *pravara* sections of Sutra-texts and does not merely quote the bare list of names without referring

to their Sutra origin. Gotra principally means a family descended from a seer while *pravara* denotes a stereotyped list of names of ancient seers who are believed to be the remote founders of a family. The importance of *gotra* and *pravara* can hardly be overestimated, for these are inseparably connected with the social life of every married Hindu. It has been laid down as a principle that man must marry outside his own hereditary group or clan and this necessitates a devout study of *gotra* and *pravara.* It is, therefore, that the *Pravara-Manjari* of Purusottama is of abiding interest to scholars investigating the main facts of the gotra-organization from the point of view of social history. And when we come to know that other treatises on the subject of *gotra* depend in a large measure on the work of Purusottama, the importance of the latter can be duly appreciated.

It is, therefore, that an edition of Purusottama's *Gotra-Pravara-Manjari* is sure to provoke genuine enthusiasm and interest in scholars who are engaged in studying the social history of Hindu India in its different periods. Dr. Brough has not edited the Sanskrit text but has given an English rendering of the uncritical text of Chentsal Rao's edition besides furnishing a valuable introduction which contains no less than eleven sections in which he has critically discussed the history of *pravara* from the Sutra-period upto the present day. Dr. Brough has tried to show that the history of *pravara* is as old as the Rgveda and that there are traces to prove that it underwent a steady growth through the ages. The notes given by the editor on almost all difficult and important points will enable a student to reconstruct the text in a more correct and improved form. It is a fact that the available printed text of *Gotra-Pravara-Manjari* which is the basis for Dr. Brough's translation-work is very much corrupt and it required single-minded and careful devotion to improve upon the printed text. It only needs to be mentioned that Dr. Brough's efforts in this direction have been amply rewarded.

The printing is not free from blemish. We need not point out in detail the number of printing mistakes (e. g. p. 40) and absence of diacritical marks (e. g. p. 131).

Gourinath Sastri.

CONNEMARA PUB… 12 DEC 1958 MADRAS

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